Yours very truly

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"PIONEERS OF THE PLANTING ENTERPRISE IN CEYLON."

(Second Series.)

SIR JOHN J. GRINLINTON, KT.,

SOLDIER, ENGINEER, SURVEYOR, MERCHANT, COMPANY DIRECTOR, M.L.C. AND M.M.C. &c., IN CEYLON:—1857 TO 1898.

BEFORE the present issue of the *Tropical Agriculturist* is in the hands of the majority of its readers Sir John Grinlinton will have retired from Ceylon where he has been resident for 40 years, and he will carry with him hearty good wishes from all sections of our mixed community for a lengthy period of enjoyment of his well-earned *otium cum dignitate.* He has long taken a keen interest in the affairs of the Colony, and for many years an active part in its public life, rendering good service as a Municipal and Legislative Councillor, Administrator of Companies, and a member of various bodies which have for their object the promotion of the material and moral welfare of his fellow-citizens. He has had a very honourable as well as successful career, and of that career we now propose in this notice to give an outline.

Erect in figure, lithe in limb, and delightfully fresh in complexion, one can hardly think that Sir John has attained his sixty-ninth year, but such is the case. Time has certainly whitened his locks, but his silvery hair and beard only serve to enhance his erect presence and alert bearing. He carries his years extremely well indeed, and we can point to him as a proof of the argument we have frequently advanced that long residence in a tropical climate, such as that of Ceylon at all events, is by no means inimical to good health or longevity. A son of the late Mr. Thomas Grinlinton of Portarlington, he was educated in Liverpool at Mount St. Institute, a well-known educational establishment, more especially for boys intended for engineering and mercantile pursuits. It was also at this school that Dr. Archer, late Brigade Surgeon in Ceylon was educated, but the Doctor had just entered when Sir John was about to leave to commence the business of life. Young Grilinton's natural aptitude for engineering was well developed here, and at an early age he entered the Ordnance Survey Office at Liverpool, where his abilities gained for him the distinction of being selected to assist Major Tucker of the Royal Engineers and the Naval Officer in charge of the survey of the mouth of the Mersey in fixing the Channel and the treacherous sand banks in that locality. The excellent work which he did there attracted notice and led, before he was 17 years of age, to his entering the Royal Engineer Service with a view to special employment at the Ordnance Map Office, Southampton, where in a short time he was placed at important duties under Executive Officer (Colonel Yolland, R E., and afterwards under the Director General Colonel Hall and the present General Gosset, who was as Capt. Gosset, Surveyor-General of Ceylon). Of General Gosset Sir John always speaks in the highest terms and looking

back on his youthful career refers to the great scientific establishment at Southampton as the school of his life, having there had many unusual opportunities, of which he did not fail to take advantage, of making himself acquainted with many branches of practical science. When at the Map Office he had the honour, during the absence of the Executive Officer, of conducting the late Lord Palmerston round that large establishment and of explaining the work in the various departments—a circumstance which his lordship did not forget when an opportunity occurred of doing a good turn for "his young friend" as he called him. In 1848 the great Railway mania occurred, but although Mr. Grilinton had tempting offers to leave the establishment for good, he was wise enough not to relinquish his fixed post, as many did and repented afterwards. Altogether he served seven years on the Ordnance Survey of England. When a change was made in the Directorship he lost his patrons Colonel Hall and Capt. Gosset. This caused him to think of a new line of life, and having been strongly recommended for a Commission he was gazetted Ensign in the 65th regiment of foot then serving in New Zealand. He, however, did not join his regiment there, but continued for some time further on the Ordnance Survey discharging the same important duties. During the period he was stationed at Southampton he took a keen interest in the Polytechnic Institute, and as a member of Committee had an active part in its management. On handing over his responsible charge in the Ordnance Survey Department he joined the depôt of his regiment in Jersey in 1854 and became Adjutant. Like most soldiers he desired to see active service, and preferring the rigours of campaigning to a military life in New Zealand he, when the Crimean War broke out, was successful, through the influence he had, in obtaining a transfer to the 4th King's Own. He joined that regiment as Lieutenant in the Crimea in 1855, and was at once placed in General Orders on the recommendation of General Sir Harry Jones (who commanded the Royal Engineers at the Siege) as Assistant Engineer, serving as such through the memorable seige of Sevastopol. It was there he met Capt. Wolsley, afterwards Sir Garnet and now Lord Wolsley, Field Marshal, Commander-in-Chief of the British Army, then in the 90th regiment and looked upon as a first-rate officer, as also the lamented Charles Gordon (R.E.) who was killed at Khartoum. Lieut. Grinlinton was also engaged in making a military survey of the Allied positions, and on the fall of Sevastopol on 8th September, 1855, he was mentioned in despatches, recommended for promotion, and received the Crimean medal with clasp, the Turkish medal and the order of Medjidie.

After the peace (in 1856 and '7) he served with his regiment at Aldershot, in Dublin, and in Mauritius; and in 1857 he had the choice of two posts, but he preferred joining his former commanding officer, the present General Gosset, who was then Surveyor-General in Ceylon and who obtained for him a nomination to the Survey Department in this Colony on a commencing salary of £550 a year and allowances in September 1857. He carried with him the goodwill of all the officers of his corps and was presented by (then) Capt. Gosset on his own and their behalf with a very handsomely worded letter and a weighty purse which was most acceptable to a young fellow starting in a new life as a Subaltern in the line on half the pay he had at the Ordnance Map Office.

Sir John's career during his residence in Ceylon extending over a period of 40 years is pretty well-known to old colonists; but in this sketch it is only right that we should enumerate a number of the prominent matters with which he has been personally identified. He laid out the Rifle Range at Mount Lavinia and was afterwards sent to Negombo and placed in charge of the Surveys in the "Alootcoor" and other Korales with a considerable force of Ceylonese who were instructed by him in the duties of field Surveyors. Thus was begun the first effort at a Cadastral Survey in Ceylon and it is interesting to think that the work started by Sir John, may in all probablity be completed by his worthy son Mr. F. H. Grinlinton who now occupies the important position of Surveyor-General of the island. When the Colombo and Kandy railway works were begun he was placed in charge of the necessary surveys at Marandahn and along the line within the Municipality of all properties to be taken up for railway purposes. About this time the Batticaloa irrigation works had been attracting a good deal of attention and early in 1859 Mr. Grinlinton was despatched to that district with a large staff of European and Ceylonese surveyors to survey and make plans of all the lands fit for irrigation and subsequently all paddy lands for tithe commutation and it was when he was engaged in this responsible work that he had a difference of opinion with the then Assistant Government Agent, the late Mr. Woodford Birch (murdered at Perak) on a subject which seriously affected the natives who had purchased land which the works designed up to that time had been unable to irrigate. This difference however, was happily made up, as we have heard Mr. Grinlinton say, before Mr. Birch left on promotion for the Straits Settlements. While resident in the Batticaloa District he was obliged to lead a rough nomadic life shifting his talipot camp every few days and travelling through uninhabited jungles known only to Veddahs and some native hunters and which very few Europeans ever visited. This was all in the course of his work in superintending the trigonometrical survey of the province; but a good deal of sport came in his way and he had what may be described as the "cream of shooting." It was during his wandering in these lonely localities that he made the acquaintance of many of the Veddahs (some of whom acted as his guides) through the assistance of a Vedarala (native doctor) who stated that his mother was a Veddah. He found them at first to be extremely shy and they frequently ran away; but afterwards they became more intimate and he speaks of them as being on the whole a docile simple-minded people. After nearly four years spent in the Eastern Province Mr. Grinlinton was transferred to the Southern Province, where he interested himself in a design for an improvement of the Galle Harbour and was granted a free passage home and back by the P. & O. Co, in order that he might further the designs. In 1865 he was brought to the Colombo Office and was Executive officer until the close of 1871 in which year he went home on leave of absence to study the narrow-gauge light railways system for the purpose of seeing whether they could be introduced to Ceylon, and had it not been for a difference with the Governor (Sir William Gregory) it is very likely that much good would have resulted from the work he did then in England and Scotland, a former commanding officer—Colonel Yolland—who was then Inspector of Railways (and who had known Mr. Grinlinton well on the Ordnance Survey) having furnished him with introductions to the engineers of every light line known to the Inspector General. In 1866 he was appointed

one of five official members to the Municipal Council and was chosen as Chairman of the Public Works Committee, and during his six years of office he designed the first Public Latrines and received the thanks of the Council. He was asked to report on a Water Supply for the City, which he did at a considerable cost to himself. For this also he received the thanks of the Council; and to him the public are indebted for having led the way in introducing Gas into Colombo. In 1871 he along with others, (Capt. Fyers, R.E., Captain Donnan, and Capt. Graham) sent in designs to Government for a Breakwater to protect the Harbour of Colombo on which the Admiralty Engineer, Mr. Townsend, passed encomiums. This Engineer, however, considered (among other things) that a northern arm which formed a part of the design and a graving dock with tramway round the shores of the Harbour were more than could be undertaken. Time, however, has shown that all have been found necessary. In the year 1868 during the total Eclipse of the Sun, Mr. Grinlinton took special observations from the top of Trinity Church for which he was thanked by Astronomical authorities in England and America.

In 1872 Mr. Grinlinton resigned the public service and was immediately appointed Managing Director of the Gas Works. He likewise adopted mercantile pursuits and established Manure Works outside Municipal limits where he converted the offal of the Municipality and the scavenging of the town into fertilising material, there being added to it sulphate of ammonia with some thousands of tons of fish from the coast of India with ammoniacal liquor and gas-lime from the Gas-works. This proved a most successful undertaking as also did certain speculations in the purchase of large cargoes of teak from Burmah. In both of these ventures he was cordially aided financially by his esteemed friend, Mr. White, then the senior partner of Messrs J. M. Robertson & Co. On the visit of H.R.H. the Prince of Wales in 1875, Mr. Grinlinton was chosen as one of the Honorary Secretaries for the reception and the indefatigable efforts then made to make the illumination of the City and the large ball-room built at the Galle Face Club a success, caused the Governor to specially present Mr. Grinlinton to H. R. H. and to send him a letter of thanks for his special services. In 1876 the Wharf and Warehouse Co. was in very low water, and the post of Manager was offered to Mr. Grinlinton and he continued in the Company as Manager and Managing Director for a period of 20 years leaving it in a flourishing condition. In 1882 he accepted in addition to his other duties the Managing Directorship of the Colombo Hotels Co., Ltd., which at the time was in a very low state, its R100 shares selling at R15 and R20 and in 1888 he became also Chairman which post he now vacates, the present quotation of shares being R335. In the Jubilee year of Her Majesty the Queen, he was a member of the Committee which undertook the preliminary and active proceedings in raising funds and carrying out the object sought to be obtained and has ever since taken an interest in the Royal Victoria Home for Incurables, then established, of which he is a Life Governor and a member of Committee. In 1887 on the formation of the Irrigation Board he was appointed an Unofficial Member and his unremitting labours in connection with that Board are well-known and have been recognized by successive Governors. In 1888 he was appointed to the European seat in the Legislative Council and the general public know the keen interest taken in every question of importance that has come before that assembly, the latest instances being his propositions in connection with sanitary management on the railway and the fares on the sea-side line, and in strongly advocating Railway extension on a narrow gauge (the metre he prefers) and on Irrigation he is ever "at home." A fluent and forcible speaker Sir John makes his points well and has always been listened to with close attention by his fellow members. He seldom if ever speaks except on a subject with which he is familiar or has carefully studied and it is generally admitted that he puts his case in a very strong light. In 1891 when preparations were being made for the Chicago Exhibition he was selected by the Planters' Association, Chamber of Commerce and the public in general as Special Commissioner and was so gazetted by Government, and during some months in 1892 and whole of 1893 he was at Chicago.

In 1891 Mr. Grinlinton succeeded (after more than a year's pressing the subject forward unofficially) in attracting the attention of Government to Uplands as the best site for a Graving Dock which could be made suitable for the largest ships in Her Majesty's Navy and the Mercantile Marine. A Commission was appointed by the Governor, Sir Arthur Havelock, to report on the subject, and the opinion of the Commission being unanimous, the site is now about to be converted into one of the finest Graving Docks in the world.

On the 25th March, 1894, soon after Mr. Grinlinton's return from America, he received the great blow of his life in the death of his wife who had been in delicate health for some years. This amiable lady was a daughter of the late Mr. Booth of Southampton, and her hospitality and benevolence are well known to many of the present residents of the Island, more especially to those who visited Nuwara Eliya. She had followed the fortunes of her hsuband to Mauritius and Ceylon, and was often with him in his journeys through remote parts of the Island where she made good use of her opportunities in writing interesting descriptions of her travels which have been preserved, and are to see the light at some future day.

Her belief in her husband was unbounded, and we do not wonder at the blank he now feels leaving this country alone and practically for good to take up his residence at Middle Wallop in Hampshire.

We attach an official record of Sir John Grinlinton's service:—

GRINLINTON, Sir JOHN J., M.L.C., A.I.C.E., F.R.G.S., F.S.A. &c.,

son of the late Thomas Grinlinton, of Portarlington; was seven years on the Ordnance Survey of England, gazetted Ensign in the 65th Regiment, appointed Depot Adjutant, served the Crimean Campaign of 1855-56 as Lieutenant 4th King's Own Regiment, and Assistant Engineer during the siege of Sebastopol; was also engaged making a Military Survey of the allied positions, was mentioned in Despatches on the fall of Sebastopol, 8th September, 1855; Crimean Medal with clasp, 5th class of the order of Medjidie, and the Turkish Medal; Assistant Surveyor-General, Ceylon, 1857; retired from the Army by the sale of his commission 1858; appointed an Official Councillor of the Municipality of Colombo at its formation in 1866, and served for six years; resigned the Public Service 1872, and subsequently followed Mercantile pursuits; Member of the Central Irrigation Board 1887 to 1897; Councillor of the Municipality of Colombo (for a second time) 1887 to 1897; Member of the Legislative Council of Ceylon (to represent the European Community) 1888; Special Commissioner for Ceylon at the World's Columbian Exposition, Chicago, 1893; *m.* Emily, daughter of the late Mr. Isaac Booth, who died 1894; *cr.* K.B. 1894.

Colombo, Ceylon, and Rose Hill, Middle Wallop, Hants.
Clubs:—Royal Societies and the Junior Constitutional.

He leaves two sons here—the elder Mr. Frederick H. Grinlinton being Surveyor-General of the Island, and the younger, Mr. Edward Gordon Grinlinton who has been a successful Tea Planter and who resides at Yalta, Nuwara Eliya. His only surviving daughter, Mrs. Coventry, proceeded to England last December.

Finis coronat opus !—The finishing touch to Sir John Grinlinton's career in Ceylon was put in the most cordial and successful and (in some respects) unique banquet accorded to him on the night of the 4th inst. by representatives of all sections and classes of the community, and which was honoured with the presence of the Queen' representative. Surely no old colonist or hardworked public man could desire a more congenial or fitting "send-off." He has not lagged "superfluous on the stage," but leaves at a time when the whole community must feel that his absence creates a blank, and when "troops of friends" regret the decision which makes his departure necessary. Sir John Grinlinton, though close on the ordinary limit of human life, is still hearty and vigorous, and his age is as "a lusty winter, frosty but kindly." No one can grudge a time of rest and retirement in his Hampshire home; but we may be certain of learning that he has found means of being useful in his new surroundings, while we may all look forward to a visit some years hence both to India and Ceylon. And so we take farewell of the worthy Knight—we have personally followed his career for over 36 years, always with interest, sometimes with criticism in words of praise or censure as the case might be, but more generally with feelings of admiration for the pluck, enterprise and indomitable industry which have marked his career. If we wished to sum up Sir John Grinlinton's character in a couplet we could not find one more fitting than that of the poet Wordsworth :—

'A man he seems of cheerful yesterdays
And confident tomorrows."

RUBBER CULTURE.

A POSSIBLE AUSTRALIAN INDUSTRY.

An age of stone, of bronze, of iron, and also, say the scoffers, one of brass, has the world passed through in turn; is it too much to claim that we are now in the rubber era, considering to-day the multitudinous articles in common use, the manufacture of which is impossible minus the indispensable inspissated juice known as caoutchouc. Indiarubber comes from many countries, but the principal supplies have been secured heretofore from tropical South America, West and East Africa, Burmah, Assam, &c. Over extensive areas of these countries the different species of rubber trees are to be found, yet, although nature in the past has been so generous [illegible] man's wants in [illegible]re the present pneumatic tyres, &c., so great is the demand and so wasteful the usual process of rubber collections—left as it mostly is to either ignorant, savage, or semi-civilised savages, taking little heed for the to-morrow of manufacturers—that specialists are casting around for fresh fields of exploitation; their prognostications being that nothing is more sure than a half response, or less, to the future cry for raw material. And this is owing to the exhaustion of the known forests, thanks to ruthless destruction of trees and lack of forethought in the matter of replanting.

Not so many years ago the Amazon valley with its Heveæ Braziliensis yielded more than enough rubber for the world's use—and the real rubber trade may be said to have commenced less than thirty years ago—to-day this supply has been supplemented from the Hancornias of Pernambuco, the Manihots of Cara, the Landolphias and Kicksias of West and East Africa, not to speak of the Ficus Elastica of the East and the celebrated Castilloa of Central America. And yet the prices are slowly rising! Needless to say the manufacturing outlook is viewed with some uneasiness. Accordingly in other climes certain far-seeing people have started plantations, more particularly of the Castilloa, the Hevea, and the Manihot, whilst the Germans, with their usual thoroughness, in their West African possessions are making systematic attempts to propagate the Landolphias. And that the harvest to be reaped will be satisfactory is assured. The profits, based on present prices, at the expiration of the eighth year can be reckoned on at 300 per cent.

The parts of the world above mentioned are tropical, with a minimum average temperature of 66 F., combined with a heavy rainfall (though the Manihots and Hancornias do not require too much moisture), and it has always been laid down as a botanical postulate that Rubber and Rain, Miasma and Monkeys, are an indivisible quartette. But the knowledge of the earth's good things increases always. For example in 1893 the output of caoutchouc from Lagos, West Africa, was practically nil. Comes along one Kicks, who discovers a hitherto unknown tree. Its product is sent to Kew Gardens, London, for report, which being satisfactory, by 1895 nearly 4,000,000lb. of rubber had been exported from that British Possession. But this by way of illustration only of what fresh discovery has done for the rubber market, for Lagos is an equatorial province. What is of far greater import to us is whether there is any possibility of the cultivation of any known tree in New South Wales. And considering what immense advantages would accrue to the farmer and planter by so doing no research for such a valuable kind of tree could be too comprehensive and no experiments too exhaustive, for the successful introduction of rubber-growing into New South Wales would mean an additional £1,000,000 to our annual export schedule. Surely an attempt to acquire such an increase is worth more than academic scepticism.

Twenty years ago that distinguished savant, the late Baron Von Mueller, stated emphatically that the Ficus elastica (E. Indies), being so closely allied to the Ficus species known here, would grow in the Gippsland valleys and gullies. Nothing so far has been done towards founding such an industry. However, opinions differ as to the speed of growth of this tree, for though experience elsewhere, in Ceylon, &c., quotes an average of eight years ere maturity is attained, it is at least likely in a fair cooler climate that the wait would have to be at least 25 per cent, longer. The deceased Baron spoke, too, of the well-known Port Jackson fig (F. Rubiginosa) which on analysis gives—Resinous sycoretin, 73; Acetate sycoceryl, 14; Caoutchouce, 13—100.

And the Apocynaceous "bitter bark," akin to the West African variety, is also reported to yield a fair percentage of commercial rubber when leaf and stalk crushing are resorted to. Beyond these Lactaria Calocarpa and Lactaria Moorei have been suggested by some writers as possible cautchouc givers.

So much for the known Australian trees themselves.

Remains now to be seen whether there are any quick-growing varieties obtainable from other countries which are suitable to the climate, say, of the Tweed, Richmond, and Clarence rivers. And, it appears, while the Castilloa might possibly meet the case, it is more than probable that the Sapium Biglandulosum would do so.

There is considerable difference of opinion as to the flourishable habitat of the Castilloa so far as New South Wales is concerned. Ordinarily speaking it is found best suited to tropical localities with a heavy rainfall; but it has been claimed that, owing to its adaptiveness, a sub-tropical climate would supply the necessary environment. Moreover it is at least suggestive to find the Ipomea Borna Nox, the juice of which is used to coagulate the caoutchouc milk of the Castilloa in Mexico, should grow luxuriantly in many part of New South Wales. So far, it is believed, no castilloas have ever been introduced into New South Wales. When full-grown it is a magnificent forest tree; but it must not be confounded with the Castilloa Markhamii, which belongs to the Perebea class. At maturity this tree's trunk often measures 10ft. in circumference, and its height will sometimes top 130 ft. It is easily distinguished by its immense hairy, oblong, and lanceolate leaves, often 18 in. by 7in., which are substrigose, as also are the branchlets the colour on the latter being buff. It is of small foliage area, taprooted, and requires a scrub surrounding when young. If grown as in a plantation the seeds should be set at a distance of 15ft. apart in uncleared ground. This is most important, a small area of about 1ft. in diameter being left clear around the young plant. So much do these trees desire shade in their youth that tests prove that whereas seedlings planted in uncleared ground develop a 9 in. trunk diameter, and flower and fruit in four years, those planted in well-cleared ground show nothing like similar advancement. In point of fact the young Castilloa needs above all things shade, for its stem's growth and juice supply else will be checked. Once suitably planted they require little or no attention. The rubber obtained at the fourth or fifth year is worth 2s 9d to 3s per lb., and so far as is known the tree with each year gives a large increase, expanding in geometrical progression. As for the collection of the juice and its metamorphosis into a commercial product that is an easy matter. It may be here added that recent discoveries show that a fair supply can be obtained from a crushing of the leaves. Whether this deciduous tree could be grown on the sugar lands of New South Wales has yet to be proved.

The other tree, the Sapium aforesaid, which it is likely could be advantageously introduced here, is one of the Euphorbiaceæ. For years past rubber has been exported from the Port of Cartagena, and under the name of that Colombian city it was supposed to be a species of castilloa. This idea, however, is exploded, and the sapium mentioned now gets its due credit, with the acquiescent approval of the botanical authorities at Kew Gardens (vide "Kew Bulletin"). To Mr. R. B. White is due the honour of the initiatory indications on which subsequently Mr. Rob. Thompson, formerly in charge of the cinchona plantations, Jamaica, went so successfully to work. Mr. Thompson, who now resides at Chapperal, Sante Fe de Bogota. Colombia, has established since 1891 a plantation of 70,000 sapium trees, and in his report to Kew he states that this tree—trade name of it, "Colombia virgen"—has this peculiarity; "Unlike all other known sources of this substance it grows at a high elevation, and therefore, in a comparatively cool climate." There can be little doubt that the tree is one of the multiform varieties of the Sapium biglandulosum (Muell. Arg.), one of the Euphorbiaceæ, to which the Para hevea and the Ceara manihot belong. The variegations which this widely-spread species present are as extreme as are to be met with in the vegetable kingdom. . . . Under cultivation this tree thrives admirably, growing with great rapidity at the rate of 5ft. per year. Crops are obtainable in five to six years, at five years, the yield begin 1lb. of rubber per tree, which is worth about 2s 6d per lb., and when matured the tree, planted at the rate of 150 to the acre, attains a diameter of from 6ft. to 7ft. This, bear in mind, has received the cachet of Kew.

Mr. Thompson's plantation, lying at an elevation of between 6,000ft. and 7,000ft. above the sea level, is on land quite useless for other purposes., and so much success has attended his efforts that at Monteira, Rio Sinn, Mons. M. P. Durand has put in no less than 100,000 cuttings and seedings, which are now flourishing. Mr. Thompson, so the "Kew Bulletin" reports, has offered the Indian Government to deliver at the Nilgirris a large supply of Sapium plants and seeds insured to germinate for £1,000. Inquiries as to this tree are now being made by the proper authorities in Sydney, and should the replies be satisfactory no doubt an attempt will be made to acclimatise this tree.

Before concluding this article, it is as well may be, to disabuse the public mind of the belief that very cheap labour is required to make rubber-getting by tree-tapping a success. In the first place, little or no labour is needed until the trees have sufficiently grown. In the second place, from personal experience, and quoting from an exhaustive article on this industry as carried on by the half-civilised half-bloods of the Amazon Valley, those mestizos can and do earn £1 per day during the season of five months.—*Sydney Mail.*

CATALOGUE OF COCCIDÆ COLLECTED IN CEYLON.

BY MR. E. E. GREEN.

[The following list of Coccidæ, which contains many undescribed species, is to be regarded as preliminary to a more exhaustive paper with figures of all the new species, now in course of preparation by the same author.—*Ed.*]

1. *Chionaspis braziliensis*, Sign.—On cultivated ferns, *Strobilanthus* sp., and *Acacia melanoxylon*, occurring, when present, in enormous numbers, the males usually predominating. A remarkable exception being in the case of specimens found on the *Acacia* which were all females.

Locality Punduloya.

2. *C. biclavis*, Comst.—Very common on stems of Cinchona and Tea, sometimes in such numbers as to considerably injure the plants. Found also occasionally on stems of Grevillea and Coffee; never on leaves, though the American type is described from examples found on leaves of fig. Male unknown. The female shield very inconspicuous, from the fact that it is always covered with the superficial fibres and loose material of the bark upon which it rests.

Locality Punduloya.

3. *C. aspidistræ*, Sign., var. *mussœndæ*, n. var.—Found on stems and twigs of *Mussœnda frondosa*. Differs from type chiefly in the character of the female shield, which is opaque, greyish white, and covered with the hairs and fibres of the bark instead of being of a "clear transparent yellow" as in Signoret's type. The male puparia are crowded together in large groups, each individual attached by the anterior extremity only, the rest of the body elevated.

Locality Punduloya.

4. *C. eugeniæ*, Mask., var *varicosa*, n. var.—Found on under surface of leaves of *Gelonuim lanceolatum*. Differs from type chiefly in character of female shield, which is proportionately broader and marked with ramifying raised creases resembling veins.

Locality Punduloya.

5. *C. eugeniæ*, Mask., var. *litzeæ*, n. var.—Found on under surface of leaves of *Litzea zeylanica*. Differs form type in the female shield being very thin and semi-transparent. Male with 3 knobbed digitules on feet.

Locality Punduloya.

6. *C. vitis*, n. sp.—Found on under surface of leaves of *Vitis*, producing discoloration of the leaf, the punctured parts turning pale yellow. Very occasionally found on upper surface of leaves of *E[illegible]gnus*. Female shield thin, colourless and semi-transparent. Pygidial lobes small but prominent. Female insect pale yellow before gestation; afterwards reddish. Male with 4 knobbed digitules on feet.

Locality Punduloya.

7. *C. graminis*, n. sp.—On lemon-grass *(Andropogon)*. Punctured area of leaf turning dark purple. Female

shield snowy white; insect reddish orange. Pellicles of male puparium dark brown. Adult male with 3 knobbed digitules on feet.

Locality Punduloya.

8. *C. minuta*, n. sp.—On *Tetranthera*. A very small species, appearing to the naked eye like minute yellowish specks on under surface of the leaf. Female shield colourless and transparent. Male puparium also very thin and transparent. Adult female insect very pale yellow. Male with 3 knobbed digitules on feet.

Locality Punduloya.

9. *C. acuminata*, n. sp.—Found on both surfaces of leaves of Ardisia and several unidentified plants. Female shield very long and narrow with a median ridge, yellowish brown. Insect very pale yellow, tinged with bright orange in order individuals. Pygidia lobes very small. Male puparium strongly carinate, the furrows coloured reddish, giving a general pink tinge to the mass. Feet with 3 knobbed digitules. Terminal point of antenna with 3 knobbed hairs.

Locality Punduloya.

10. *C. elæagni*, n. sp.—On *Elæagnus latifolia* under surface of leaves. Female shielo thin, whitish, but closely covered with the stellate hairs of the leaf. Insect bright yellow. Pygidium reddish. Pygidial lobes large and prominent. Male with 3 knobbed digitules on feet.

Locality Punduloya.

11. *C. exercitata*, n. sp.—On both surfaces of leaves of Tea, *Pyscaotria* and other plants, in colonies consisting usually of one, or a very few females and a large number of males; the white carinated male puparia being disposed very regularly in parallel lines. Female shield long and narrow, reddish brown. Insect dull purplish red; pygidium with single median lobe. Male with 2 knobbed digitules on feet.

Locality Punduloya.

12. *Aspidiotus nerii*, Bouché.—Common on Tea, *Loranthus*, *Dalbergia*, Palms, etc.

Localities Punduloya, Kandy, Colombo.

13. *A aurantii*, mask.—On Agave (American aloe) and *Citrus pomela*.

Locality Punduloya.

14. *A. osbeckiæ*, n. sp.—On atems of *Osbeckia*, not common. Allied to *nerii*, but differs in the opaque brownish shield, and the marginal hairs of the insect. Male with black apodema. Feet with 4 knobbed digitules. Terminal joint of antenna with 3 knobbed hairs.

Locality Punduloya.

15. *A. occultus*, n. sp.—In minute galls on leaves of *Grewia orientalis*. Female pale yellow: no grouped spinnerets. Male with 4 digitules on feet, and 3 knobbed hairs on terminal joint of antenna.

Locality Punduloya.

16. *A. trilobitiformis*, n. sp.—On leaves of unidentified tree. Female shield broad and flat, opaque, reddish brown. Insect very regularly and symmetrically formed; segents strongly marked: a deep transverse groove behind the cephalic segments. Pygidium with well-marked reticulated path on upper surface.

Locality Punduloya.

17. *Diaspis lanata*, Morg. and Ckll.—Very common on stems of geranium, *Callicarpa lanata* and *Tylophora asthmatica*. Very destructive to cultivated geranium, the stems often being completely covered with the white male puparia.

Locality Punduloya.

18. *D. circulata*, n. sp.—Common on young tea plants and on the twigs of older bushes: also on Cinchona and *Osbeckia*. Female shield yellowish: pellicles usually dark, with a small whitish central boss surrounded by several concentric raised circles. Insect yellow. Male unknown.

Locality Punduloya.

19. *Mytilaspis citricola*, Packard.—On orange, and leaves of *Cocculus indicus*.

Localities Punduloya, Kandy.

20. *M. elongata*, n. sp.—On leaves of *Arundinaria*. Female shield very long and narrow, snowy white. Insect also very long; almost linear; pale yellow to orange. Male with 4 knobbed digitules on feet, and 6 knobbed hairs on terminal joint of antenna.

Locality Punduloya.

21. *M. pallida*, n. sp.—On leaves of unidentified shrubs. Allied to *M. citricola*. Female shield proportionately longer, smoother and more regular, very pale yellowish or brownish. Insect creamy white: pygidium pale reddish. Male pale lilac: foot with 3 knobbed digitules: terminal joint of antenna with 3 knobbed hairs.

Locality Punduloya.

22 *Aonidia corniger*, n. sp.—On upper surface of leaves of *Psychotria* and *Litzea*. A very remarkable form, the first pellicle bearing a series of 16 long, glassy, colourless horn-shaped processes. Adult female pale lilac: completely enclosed within second pellicle: pygidiums without spinnerets: margin produced into tooth-like processes.

Locality Punduloya.

23. *Fiorinia saprosmæ* n. sp.—On under surface of leaves of *Saprosma*. Female shield almost completely occupied by the second pellicle, which is pale orange coloured. Male puparia concealed beneath a mass of loose white filaments. Female insect pale yellow: minute jointed tubercles on margins of abdominal segments. Locality Punduloya.

24. *F. secreta*, n. sp.—In small galls on leaves of *Grewia orientalis*. Female insect yellow: pygidium long and pointed, with a prominent double median lobe: no grouped spinnerets.

Locality Punduloya.

25. *F. scrobicularum*, n. sp.—In glandular pits at base of veins on leaves of *Gærtnera kœnigii*. Female shield very narrow in front, widened behind; pale yellowish with reddish median area. Insect pale yellow: pygidium with deep median cleft.

Locality Punduloya.

26. *F. Palmæ*, n. sp.—On fronds of Coconut palm. Differs from *F. saprosmæ* in smaller size, and in possession of a long stout spinelike process on rudimenrary antennæ.

Locality punduloya.

27. *Planchonia bambusæ*, Boised.—On stems of Giant Bamboo. Male unknown.

Locality Punduloya.

28. *P. miliaria*, Boisd., var. *longa*, n. var.—On *Arundinaria*. Differs from type in proportionately greater size and length. Male yellow. Terminal joint of antenna with 3 knobbed hairs.

Locality Punduloya.

29. *P. delicata*, n. sp.—On leaves of *Arundinaria*. Much less convex than *P. bambusæ*: sometimes almost flat. Male reddish; antennæ with 6 very long whip-like hairs, and 3 knobbed hairs on terminal joint.

Locality Punduloya.

30. *P. solenophoroidei*, n. sp.—on leaves of *Arundinaara*, a minute species. Hinder part of female test narrowed and elevated. Insect bright yellow. Male pale yellow; foot with 3 digitules: antenna with 3 knobbed hairs at apex.

Locality Punduloya.

31. *Walkeriana floriger*, Walk.—On stem of *Litzea zeylanica*.

Locality Punduloya.

32. *W. compacta*, n. sp.—On stem of unidentified tree. Without the silky filaments and tufts of *W. floriger*. Short, stout, compact, conical white processes on dorsum.

Locality Kelani valley.

33. *W. euphorbiæ*, n. sp.—On branches of *Euphorbia antiquorum*. Very convex behind; narrowed and depressed in front. Short curved conical processes in concentric series.

Locality Hambantota.

34. *W. poleii*, n. sp.—On stems and twigs of *Dodonæa viscosa*, Pinkish grey: short, conical, truncate yellowish processes: very convex dorsally: laterally compressed inner side of femur with stout spines.

Locality Chilaw.

35. *W. senex*, n. sp.—On stems and twigs of *Dodonæa viscosa*. Broader, flatter than *W. Poleii*: processes very long and curling white or brownish.

Locality Chilaw.

36. *Orthezia insignis*, Dougl.—On numerous ornamental shrubs, affecting specially *Acanthaceæ*. A very destructive species. Male slaty-grey with a brush of long silky filaments from extremity of abdomen. This species has been redescribed from Ceylon specimens by Mr. Buckton under the name of *O. nacrea;* but I can find no distinguishing points between this and the species from Kew. In fact our specimens are doubtless the direct descendants from the Kew insect, as they first appeared in the plant-houses of the Government Botanical Gardens at Paradeniya.

Locality Kandy.

37. *Monophlebus zeylanicus*, n. sp.—On trunks of *Antidesma bunius*. Female bright orange-red: rather long and narrow. Insects of second stage occupying small cells in the living tissue of the bark.

Locality Punduloya.

38. *Icerya ægyptiaca*, Dougl.—On leaves of variegated Croton.

Locality Chilaw.

39. *I. tangalla*, n. sp.—On leaves of unidentified plant. Differs from *ægyptiaca* in absence of dorsal waxy cushions, and the marginal processes being very short, stout and truncate.

Locality Tangalla.

40. *I. crocea*, n. sp.—On leaves of Citrus, Croton and Cocculus. Body reddish orange: dorsal area covered with bright yellow mealy secretion, with double marginal series of yellow waxy tufts and numerous delicate silky filaments.

Locality Punduloya.

41. *I. pilosa*, n. sp.—On a species of wiry grass growing on seashore. Body dull crimson: dorsal area completely covered with white granular powder and short white filaments: skin with blackish hairs.

Locality Chilaw.

42. *Eriococcus arancariæ*, Mask.—On *Arancaria*, occurring locally in enormous numbers, making infested trees quite unsightly from the sooty fungus that accompanies the insect.

Locality Newera, Eliya.

43. *Coccus cacti*, Anct.., var. *ceylonicus*, n. var.—On *Opuntia*. Differs from type in proportions of antennæ in different stages. Male, with a pair of longish knobbed hairs on each of last seven joints of antenna.

Locality Hambantota.

44. *Pseudococcus mangiferæ*, n. sp.—On *Mangifera indica*. Female pale yellow, dorsal area covered with white mealy powder, except on a subtriangular median patch: a marginal series of stout white fragile processes. Male very pale yellow.

Locality Punduloya.

45. *Dactylopius adonidum*, Lin.—On nearly every cultivated plant and in every part of Ceylon.

Localities Punduloya, Kandy, Colombo, Chilaw, Hambantota.

46. *D. longifilis*, Comst.—On *Fasminum* and *Adiantum*.

Localities Punduloya, Kandy.

47. *D. talini*, n. sp.—On *Talinum*, *Lilium*, Croton. Female purplish brown, sparsely dusted with white powder: a single pair of longish stout filaments at abdominal extremity: numerous long, very delicate, colourless, glassy filaments.

Localities Colombo, Kandy, Chilaw.

48. *D. scrobicularum*, n. sp.—In glandular pits at base of veins of leaves of *Elæocarpus*. Dark slaty-grey, sparsely covered with whitish powder, abdominal segments only with stout white processes, which protrude from the opening of the cell in which the insect lives.

Locality Punduloya.

49. *Vinsonia stellifer*, Westw.—On leaves of Mango, *Ficus antimcsma*, Coconut palm and other shrubs.

Localities Punduloya, Kandy, Colombo.

50. *Ceroplastes floridensis*, Comst.—On Tea, Mango and *Citrus*.

Locality Punduloya.

51. *C. ceriferus*, Anders.—On stems of *Antigouon* and *Poutzolzia*. Specimens from the hills less than half size of those from low country.

Localities Punduloya, Chilaw.

52. *C. actiniformis*, n. sp.—On leaves of Coconut palm. Very convex. Median area of test with radiating purple lines.

Localities Punduloya, Kandy.

53. *Pulvinaria psidii*, Mask.—On Guava, Tea, Cinchona and numerous shrubs and plants. Occurring in enormous numbers and doing considerable injury to infested plants.

Locality Punduloya.

54. *P. tessellata*, n. sp.—On leaves of *Ophisrrhiya pectinata*.. Female scale with tessellated markings; bright green ovisac, fluted.

Locality Punduloya.

55. *P. tomentosa*, n. sp.—On unidentified tree. Female scale olive-brown; median area rather thickly covered with small balls of tightly curled woolly filaments, ovisac with deep median longitudinal furrow.

Locality Punduloya.

56. *Lecanium coffeæ*, Walk.—Common on leaves and stems of Tea, Coffee, various ferns, and numerous other plants.

Localities Punduloya, Kandy, Colombo, etc.

57. *L. longulum*, Dougl.—On branches and twigs of *Albizzia* and *Grevillea*.

Locality Punduloya.

58. *L. viride*, Green.—On Coffee, Cinchona and numerous shrubs and trees. A very injurious species. But though it has killed out the coffee in whole districts, it has fortunately not seriously attacked Tea.

Localities Punduloya, Kandy, Colombo, etc.

59. *L. mangiferæ*, Green.—On leaves of cultivated mango trees.

Locality Punduloya.

60. *L. nigrum*, Nietner.—Rather Common on various shrubs and plants, Croton, Asparagus, *Begonia*, *Cobæa*, etc. Though originally described from coffee, it is now very seldom seen upon this plant.

Localities Punduloya, Kandy, Colombo, etc.

61. *L. tessellatum*, Sign.—Rather common on leaves of *Caryota urens*. Found also on Cinnamon and some other shrubs.

Localities Punduloya, Colombo.

62. *L. planum*, n. sp.—On upper surface of leaves of unidentified tree. Bright castaneous to dark chocolate brown. Flat, broad. Subtriangular: pointed in front. Antennæ 6-jointed. Margin with continuous fringe of very delicate overlapping fan-shaped scales. Dermal cells small and circular on median area, oblong and irregular towards margin. Male puparium divided into 18 plates. Adult male without caudal filaments.

Locality Punduloya.

63. *L. planum*, var. *maritimum*, n. var.—Found on both surfaces of leaves of a thorny shrub growing on the sea-shore (within reach of surf). Differs from type in smaller size and absence of dermal cells. Scale protected by a secretion that becomes tough and gelatinous under treatment with potash.

Locality Bentota.

64. *L. geometricum*, n. sp.—On leaves of unidentified shrub. Pale castaneous, or fulvous. Flattish, subcircular, median dorsal area with concentric series of polygonal depressed spaces. Antennæ 6-jointed. Marginal fringe of overlapping fan-shaped scales. Dermal cells oblong, irregular.

Locality Punduloya.

65. *L. marginatum*, n. sp.—On upper surface of leaves of *Psychotria thwaitesii*. Pale fulvous to castaneous, a sub-marginal zone almost colourless. Oval, pointed in front. Antennæ 6-jointed. Marginal fringe of overlapping semi-circular scales. No dermal cells. Male with long caudal filaments; costal nervure of wing bright carmine.

Locality Punduloya.

66. *L. expansum*, n. sp.—On leaves of *Litzea* and *Dalbergia*. A very large flattish species. Longest diameter nearly ½ inch. Margin with continuous fringe of fan-shaped scales. Antennæ obscurely 6 (?)-jointed. Legs wanting.

Locality Punduloya.

67. *L. antidesmæ*, n. sp.—A single specimen found on leaf of *Antidesma bunius*. Very flat, but opaque: reddish brown with a thin-greyish powdery film.

Antennæ 8-jointed. Margin with simple stoutish hairs. A distant series of short, fine, white cottony filaments springing from glandular spots near margin.

Locality Punduloya.

68. *L. caudatum*, n. sp.—Very abundant on leaves of *passiflora*, occasionally on Coffee. Convex oblong, oval; broadest behind. Colour varying with age from bright orange to deep chestnut brown; the paler specimens with a dark brown longitudinal and several transverse bands. Three or four very long white thread-like filaments springing from anal aperture, frequently extending two or three times length of insects. The hairs from ano-genital ring very conspicuous, stout and dark coloured; marginal hairs dilated and toothed. Antennæ 7-jointed.

Locality Punduloya.

69. *L. acutissimum*, n. sp.—On under surface of leaves of Coconut and other palms. Very narrow; pointed in front and behind of the shape and size of a carroway seed. Reddish brown to black. Antennæ 6-jointed. Single stigmatic spine.

Localities Punduloya, Kandy, Colombo.

70. *L. piperis*, n. sp.—On leaves of wild pepper, upper surface. Female broadly oval, flattish, with prominent median longitudinal, and two transverse ridges. Pale fulvous to pale reddish brown. Antennæ 8-jointed. Stigmatic spines in deep cleft, four to six. Male puparium divided into 18 waxy plates.

Locality Punduloya.

71. *L. ophiorrhizæ*, n. sp.—On leaves and stems of *Ophiorrhiza pectinata*. Oblong, pointed in front. Pale fulvous with dark reddish, reticulated pattern. Stigmatic spines three, the central one very long and prominent. Antennæ 8-jointed. Male puparium composed of 9 glassy plates, a median longitudinal series of prominent points.

Locality Punduloya.

72. *L. formicarii*, n. sp.—On stems of Tea and other shrubs, always sheltered by nests of a small brown ant (*Cremastogaster*, sp.). Highly convex, almost globular; dull brown.

Locality Punduloya.

—*Indian Museum Notes.*

YIELD OF BLUE-GUM PLANTATIONS.

From some interesting figures lately supplied us by a correspondent, we gather some valuable information regarding the yield of fuel from gum plantations:—

	Age.	Elevation.	No. of trees per acre.	Stack per acre.	Annual increase per acre.	Average dimensions of trees.	Annual increase per tree.
	Years.	Feet.	No.	Cubic ft.	Cubic ft.	Cubic ft.	Cubic ft.
1	5	7,235	847	2,966	593	3·5	0·2
2	6	5,954	980	2,151	302	2·2	0·3
3	9	6,694	1,045	5,963	503	5·7	0·6
4	10	7,382	469	6,894	585	14·7	1·4

Equivalent of cubic feet in tons is 45 cubic feet =1 ton, Govt. ratio.

Taking the question of elevation first, it will be seen that the hightest plantations give decidedly the best results, both in actual stock and annual increase per acre. Naturally the youngest plantation (No. 1) leads the way in annual increase per acre, while it is undoubtedly the lower elevation that make No. 2 and 3 so inferior to the others. No. 4, by the way, is the average of two plantations, very similar in age, elevation and other details. Another factor to be noted is the number of trees per acre, No. 3 containing far too many for its age, nine years. The chief influence on the yield, however, to be gathered from our figures, is that of elevation. Detail as to soil, exposure, &c., are unhappily not given.

The Government ratio of 45 cubic feet to one ton seems to be far under the mark, as this gives very nearly 4,500 lb. dry weight per the usual stack of 100 cubic feet. With timber under ten years, the average runs according to our experience to 3,500 lb. per 100 cubic feet or 64 cubic feet per ton. Naturally the younger the trees, the lighter the stack, for it is certain that the cubic space occupied by the stack certainly does not represent 100 solid cubic feet of timber owing to the interstices between the logs. The actual weight of a cubic foot of dry blue-gum timber runs out, it is true, to the Government standard of 45 lb. We mention this to warn planters basing the actual dry weight of the fuel they grow by such a high standard as 45 lb. per stacked cubic foot.

A query was recently propounded as to whether it paid better to buy or grow one's fuel for firing purposes. This depends of course on the price of the outside fuel available and on the quality of the reserve land on the estate. The annual yield in lb. of fuel per acre of gums varies from 10½ thousand pounds at say 6,000 feet to 20¾ thousand pounds at say 7,000 feet. Or say the plantations were cleaned felled in successive plots each five to six years' old, the yield would vary from 70,000 lb. to 105,000 lb.

Any further information that our correspondents may furnish will be gladly welcomed.—*Planting Opinion.*

PLANTING NOTES.

FORESTS.—The following table of forest distribution in several sea bound countries, from which a fairly reliable data is given may be of interest, says Mr. D. Forbes in the Hawaiian *Planters' Monthly*:—

Countries.	Percentage of total average of country under forest.	Forest area per head of Population in acres.
East India (British) ..	25 %	·5
U. S. America ..	17 „	7·6
Russia in Europe ..	42 „	6·1
Sweden in Europe ..	35 „	9·1
Germany in Europe..	26 „	·8
Italy in Europe ..	22 „	·5
France in Europe ..	16 „	·6
Germany in Europe..	4 „	·1

POOR QUALITY OF CEYLON TEA.—An Up-country Visiting Agent writes to our evening contemporary:—If most planters began to pluck fine, there would be a plethora of fine teas, which would be, a way, a drug in the market, while the few who continued to pluck coarsely would score considerably. There is a demand for different kinds of tea at different times, and it has paid of late to pluck coarsely to meet the demand for a particular kind of tea. As for the falling-off in quality in March, April, and May, and the consequent drop in the market, it is due in my opinion to the weather, which affects the sap in the tree, and, when the rains set in, the leaf improves at once, and prices rise. Fine plucking will not alter this. I have always held that the market would be relieved and prices steadied by planters going in for making green teas for America on a big scale, and that the Thirty Committee should financially assist for a twelve-month those who would do so. The Committee have lots of money, and this method of spending it would be quite as beneficial as subsiding traders in America and Russia to build up big business for 'themselves." As to the "expert and tea rejection" scheme, it would require legislation before it could be carried out, as there is no law at present to prevent the tea planter shipping any rubbish he likes. Of course, if tea is bad enough, and we hear of tea bought in Colombo for ten cents being shipped home, the rejection ought to take place at the British Customs. Tea unfit for human consumption is rejected now in America as well as in Australia, and the same vigilance ought to be exercised in England. But the English tea-drinker appears to be able to consume what is too bad for any other country. Surely the Ceylon Association in London might wake the Customs up, as rejection on the other side would be much more easily carried out, and a less invidious duty, than if done in Colombo. Otherwise, we think something should be done on this side.

CEYLON TEA IN RUSSIA.

We give prominence to the following interesting letter addressed to us by Mr. J. M. Maitland-Kirwan from Moscow. Its perusal will whet the general expectation for Mr. T. N. Christie's Report and advice as to the future campaign in favour of our tea in Russia:—

Moscow, Dec. 10, 1897.

DEAR SIR,—You will no doubt be interested to know what the position of Ceylon teas is in this country, and you will shortly have the report of Mr. Christie, whom I have had the pleasure of meeting on several occasions.

The enormous duty of eighty kopecks (1s 10d) per lb, together with many other restrictions, of which Mr. Christie's Report will inform you, tends heavily to hamper the budding of a new product, especially so in this country, in regard to Ceylon tea, where "Russians" have such a firm grip of the palate. Nevertheless, it is most encouraging to know that, in spite of such difficulties, the imports of our teas have risen during the last six years to close on 4,000,000 lb. and this, you may say, with practically no Advertising. I have been going mostly closely into matters during the week I have been here, and I am of opinion that a good round sum of money, spent judiciously in Advertising, would be a well-invested capital. I am afraid Mr. Christie does not altogether adopt my view as to this, but, nevertheless, with every deference to his excellent judgment, that is my undoubted opinion. Mr. Rogivue has done good work here; he has had a hard uphill game to play, and has played it honestly and well, and is now rewarded as he deserves, by having an uncommonly good business at his back. We want more "Rogivues" out here; there is plenty of room for them, and we shall no doubt get them in time, but assistance will be required to enable such to start, and to this the "Thirty Committee" will doubtless give their careful attention. It is certainly a most important matter and worthy of their gravest consideration.

Weather here is intensely cold, though the sun is shining, and clothed as you are from head to foot in fur, the icy air still finds its way in and makes one sometimes long for the balmier breezes of a certain isle far away in the gorgeous East.—Yours faithfully,

J. M. MAITLAND-KIRWAN.

We are as firm believers in Advertising as our Correspondent; but we doubt the wisdom of starting more "Rogivues" as opponents of Russian tea-dealers—cannot Ceylon planters work through the latter? Mr. Christie may tell us.

TEA PLANTING IN ASSAM: THEFTS OF TEA—BREAD AND LIQUORS:

(*Notes from a Correspondent.*)

What you wrote some while ago about the local consumption of tea, was very interesting. Our case here is very much the same. While nearly every native now-a-days drinks tea, it is not procurable in the open market. The amount of tea sold locally, on the gardens, is very small, so the pilfering that goes on in every factory must be enormous. Any cooly going to the village to buy rice or dhan (paddy) can always barter tea for these things or any little necessaries he may want; it is a beautiful system, naturally beneficial and free from all worry and waste of time, tea, unlike cash, being procurable whenever wanted. I have made several ineffectual attempts at different times to buy tea, but the khyahs will not sell me any for fear I might make enquiry as to whence it was procured.

It seems rather hard lines that the coolies should always select the best tea for their simple transactions. If their pilfering was confined to the coarser grades, one would not mind so much, but they have not the decency even to take unassorted teas. In the numerous cases of theft on gardens, so far as I have seen, the tea found in the cooly's possession has been almost invariably of the best grades: taken away from the factory by a woman, or her child, as she was suffering from fever!

How do you make bread in Ceylon? I cannot get my servants to make it without yeast; they say it is impossible. Natives of course make use of the country grog, which is said to be made from the flower or fruit of the "mahwah" tree, but a paid servant cannot debase himself to use such stuff. It is imported into the district by the "sharab maholdars" or liquor-shop keepers, but it has an overpowering smell, enough without any of its adulterants to make the consumer drunk. I should think that "lao pani," fermented rice liquor, would be a good substitute for yeast. It is a glorious beverage, so I have been told, but the Government in its inscrutable wisdom has made its preparation an offence in order to realize a noble revenue from licensing liquour shops. If the natives wish to get drunk it must be done on spirits "recommended by the (Government) faculty," not on a simple, unsophisticated beverage at 8 annas a bottle!

COFFEE, RUBBER AND TOBACCO IN COSTA RICA:

THE SARAPIQUI ESTATES CO., LD.

The Sarapiqui (Costa Rica) Estates Co., on whose property Mr. J. L. Shand made so favourable a Report, afterwards joining the Board, has issued its first Report. Besides Mr. Shand, two other well-known Ceylon men are Directors, namely, Messrs. J. H. Thring and R. P. Macfarlane, their colleagues being three city merchants, Messrs. Jennings, Maguire and Phipps. With a capital paid-up of £46,756 (£40,000 being the cost of the property which includes an immense area of fine land besides 144 acres of good coffee), the Directors are very properly going to work cautiously and judiciously. The following is from the first Annual Report:—

Work on the Company's plantations has been diligently prosecuted, and considerable progress has been made. The 128 acres referred to in the Prospectus as being already planted have on re-measurement turned out to be 144 acres. This area has been thoroughly cleaned and weeded, and part of it is bearing crop. In addition some 400 acres have been taken in hand and are being planted with coffee. The quality of the coffee has been established by a sample shipment which arrived in July and was sold in September at an average of 96s per cwt, part having realised 108s. Considering that this coffee was defectively cured, owing to the want of proper machinery the result must be considered satisfactory.

It is the desire of the Directors to proceed with the cultivation of Tobacco and India-rubber, and the realisation of the Company's large Estate in timber so soon as funds and the exigencies of work permit; but it is their opinion that for some time to come it will be necessary to devote the resources of the Company both in money and energy to the development of the coffee land.

It has been arranged for a Member of the Board, Mr. R. P. Macfarlane, who has great experience in coffee planting, to visit the plantations, sailing by the Royal Mail Steamer of 12th January, and with him will

go out an assistant to Mr. Rothe. The heavy outdoor duties require all the Manager's time and attention, and very much interfere with the necessary work of accounts and stores, hitherto attended to by him personally.

As an experienced, shrewd and thoroughly reliable coffee planter, the impressions and report of Mr. Macfarlane on the Costa Rica estate will be looked for with much interest. The Directors are doing wisely in devoting some attention to other products, especially to tobacco (for which their rich soil is suitable) and to rubber for which the demand steadily grows year by year. The Secretary this Company, Mr. A. G. Beeston, has an old connection with Ceylon, his father having been Secretary and Agent to the first Ceylon Railway Company and resident here in Sir Henry Ward's time; while he himself is a nephew of the late Mr. Geo. Steuart, founder of the well-known Colombo firm. The Chairman, Mr. G. D. Jennings, is much esteemed as a man of high character and prolonged City experience.

PRODUCE AND PLANTING.

PLANTING IN BRITISH BORNEO.—On Tuesday night, at a meeting of the Royal Colonial Institute, Mr. E. P. Gueritz read a paper on "British Borneo." The reason given by Mr. Gueritz for the absence of popular knowledge of Sarawak among the commercial community of London, as compared with that of the native States of the Malay Peninsula, Labuan, and North Borneo, was her inability to compete in mineral wealth with the vast tin deposits of the Peninsula. Trade, which was generally carried on through Chinese merchants, included exports of sago—flour (of which 15,481 tons were exported in 1896), gutta, india-rubber, beeswax, birds' nests, quicksilver, tobacco, rice, rattans, and coal. Attention was drawn to the territory as a field for the planter, and reference made to its success in regard to the production of tobacco, the area of which was being extended. Coffee and coconuts were receiving considerable attention, while manila, hemp and rhea had also been planted, and gambier to a small extent. An experiment in tea-planting was also being made on a considerable scale.

COFFEE MIXTURES.—Dr. Bostock Hill, who is the analyst to the Warwickshire county, in making his report to that body, recently referred to the sale of various kinds of mixtures, and said "there can be no doubt that the sale of these coffee compounds, even when labelled, is a fraud, as the price charged for them is always higher than their commercial value, while the purchasers have no means of knowing how infinitesimal is the quantity of coffee contained. . . In future legislation I am of opinion that it would be very desirable for all such mixtures to be labelled, and that the label should indicate the proportions of the foreign ingredients." Some of Dr. Hill's confrères made the same suggestion to the Select Committee on Adulteration, but their report states: "After careful consideration of the matter, your committee have come to the conclusion that they cannot support the proposal that the labels on mixtures should set forth the several components of the mixture, as well as the fact of admixture."—*H. and C. Mail*, Dec. 17.

THE CEYLON LAND AND PRODUCE COMPANY, LIMITED.

REPORT OF DIRECTORS.

Your directors have the pleasure to submit the annexed profit and loss account and balance sheet for the crop year ending June 30th, 1897, duly audited. The amount at credit of profit and loss account is £10,356 7s 5d, which, with the sum of £788 5s 9d brought forward from last year, leaves £11,144 13s 2d to be distributed. On July 22nd last an interim dividend of seven and half per cent on the ordinary shares and three per cent on the preference shares was paid, and your directors now propose to pay on December 31st, 1897, the balance of the fixed cumulative dividend on the preference shares (three per cent), making six per cent for the year, and seven and half per cent on the ordinary shares, making fifteen per cent for the year, and, in addition a bonus of five per cent on the ordinary shares—all free of income-tax. It is also proposed to transfer £3,500 from profit and loss account to reserve fund, increasing that account to £10,500, and carry forward the balance of £1,438 13s 2d, subject to the directors' remuneration for the year under review, to be fixed at the general meeting, and to the payment of income-tax, &c. In accordance with a resolution of the board, a call of 10s per share was made upon all members holding ordinary shares upon which only £2 10s had been paid, and the same was payable on January 1, 1897. In pursuance of the terms of the notice, the dividend and bonus will be calculated as from the date of receipt of cash. It is a source of gratification to your directors that they are again able to lay before the shareholders evidence of the continued success of the company, notwithstanding the increased cost of production, mainly due to the rise in exchange. The crop of tea greatly exceeded the estimates drawn up at the commencement of the financial year, but the forecast of the cocoa crop was scarcely realised, owing to a very heavy rainfall in December last. The prices obtained for tea were lower than those recorded in the previous period, but it is pleasing to note that a substantial rise in the values of cocoa has been realised.

TEA.—The expansion in the trade in Ceylon tea is indicated by the increasing quantity offered at auction here during the eleven months from January 1 to November 30, which was 1,082,700 packages, realised at an average price of 7¾d per lb, compared with 8¼d per lb obtained for 962,000 packages in the same period last year. It speaks well also for the popularity of the article that deliveries fully kept pace with the increased supply, so that the bonded stock in London was 1,000,000lb less on the 30th ultimo than it was a year ago. Quality has varied a good deal, probably due to climatic influences. On the whole the crop has been of a useful description, though the fine flavour, which was at one time the feature in Ceylon tea, is not now so often noticeable as formerly. Common to medium grades ruled about steady through most part of the year, due largely to the growing demand for "leafy kinds" for the Continent and other quarters outside the United Kingdom.

Fine and finest generally met with good competition, but prices showed some irregularity at times, being much influenced by the fluctuations in quality noticed above. Business from London to Russia, the Continent generally, as well as to Canada and America, continues to increase, and exports to these countries bid fair to become a very important feature. Total shipments for the first eleven months of this and the two previous years to November 30 were, according to the Board of Trade returns:—1897, 9,590,000 lb.; 1896, 7,418,000 lb.; 1895, 6,535,000 lb.

COCOA.—It is a satisfaction to your directors to report that the sales of our crops have been at enhanced values on those of last year, and we have to look back to 1894 for similar prices. By judicious handling, your directors were enabled to finish the realising up to 85s, which is the highest figure obtained this year. The outlook for the article is hopeful, but a return to the high values existing previous to 1894 is improbable.

COFFEE.—The small crops from the company's estates have been disposed of at the best possible prices, but the prognostications of your directors given in

last year's report, pointing to a further reduction in values, have been realised beyond their expectations. The price secured in February for good yellow Liberian was 70s, but in September only 54s 6d was obtainable, and although it is satisfactory to your directors to report that these were extreme at the time they regret that prices have had a further decline, and the value now is about 42s per cwt. The prospect for this article is not promising, on account of the large increase in the production of other countries, especially of Brazil, and we have to refer to the years 1885 and 1886 for similar values.

ACREAGES.—The following statement shows the approximate acreage of the company's properties at date:—Tea, 2,232½; cocoa, coffee, coconuts, etc., 1,582; forest, grass, chena, abandoned, etc., 1,341¾; total acreage, 5,156½.

The crop prospects for the season 1897-98 appear to be, so far, favourable, and according to the last reports received from the chairman—who is presently in the island—the estates were in excellent condition. Mr. William Keiller, by rotation, retires from the directorate, but, being eligible, offers himself for re-election. Mr. James B. Laurie, the auditor, also retires, but he is eligible, and offers himself for re-election.—*H and C. Mail*, Dec. 17.

THE CEYLON PROSPECTING SYNDICATE LIMITED.

10 ST. SWITHIN'S LANE, E.C.

Report of the proceedings of the Annual Meeting, held at the Company's Offices, 10 St. Swithin's Lane, E.C., on Wednesday, 1st December, 1897, Mr. A. W. Lawder, M. Inst. C.E., F.G.S., in the Chair.

The Secretary read the notice convening the Meeting.

The CHAIRMAN said:—Gentlemen, In rising to address you today, I am sorry that I have to do so in place of Mr. Wallis, the Chairman of the Company. Unfortunately he has been summoned to attend a jury this morning, and is therefore unable to be with us. He expresses his great regret at this, as he always has the interest of the Company at heart. The Directors' Report and the Balance Sheet have been circulated and are in your hands, and in rising to move their adoption, I would like to make a few remarks. Since the Statutory Meeting, held in this room, considerable progress has been made with the Company's business. At that time we had acquired the option for certain lands in the Island of Ceylon, and the rights to the patents for machinery to work them. We have since then exercised that option, and have become landed proprietors in the Island of Ceylon, being now in possession of 191 acres of freehold property. We have also been busy in the exercise of our patent rights, and have had manufactured for us a large and powerful plant, capable of dealing with the alluvial gravels of the Island in a way they have never been dealt with before. The land we have is acknowledged on all hands to be good gemming land, and as we have made up our minds, I think wisely, to commence our work on a large scale, and in a vigorous manner, there is no room to doubt that the operations of the Company must be successful. Our machinery has been on view and at work during the course of last month at Westbourne Park, and invitations to see it were issued to our shareholders, and to many other gentlemen interested in the subject, who were agreeably surprised at the power and suitability of the plant, and the efficiency with which it did its work. I may state that it has fully realised all expectations, and notices of a highly satisfactory nature have appeared in the technical journals. With regard to the Balance Sheet, there is not much in the way of explanation to be said. You have the figures and the Board will be very pleased to hear any remarks, or to add any explanations on points arising that may suggest themselves to the Shareholders. It will be noticed that we still have some shares to place, and I may say that it is the policy of the Board to obtain further subscriptions for these, rather than to make further calls at present on those already taken up. I may add that we have with us to-day a Shareholder who knows our property well, and being thoroughly conversant with the Gemming industry in Ceylon, I will ask him a little later to make a few remarks on the subject. I now, Gentlemen, beg to formally move that the Report of the Directors and the Balance Sheet be adopted.

Captain H. L. PILKINGTON, a Director, said:—I rise to second the Resolution moved by the Chairman that the Report and Balance Sheet now before the meeting be adopted. I think we have done excellently when we consider the two great difficulties under which we have had to work; the difficulty of developing new machinery, and that of taking up an industry that has not up to the present been successfully worked by an English company. Should we prove successful in our work, we ought to have a very big thing indeed before us. The possibilities of the Gemming industry in Ceylon are almost unlimited, and as we have the sole right of using Mr. Lockhart's machinery in the Island, I regard our position as most favourable. We have a first-class freehold property in Rakwana, the great gemming district of Ceylon, we have plenty of water, and, above all, we know, by the very successful working of our machinery at the recent trials, that the gems in the alluvial to be treated by our plant will beyond doubt be secured, and that we shall not be in the hands of the natives as other companies were.

Mr. ARNOLD FRANCKE, a shareholder, asked for information as to the number of shares taken up, and the amounts paid on them, and some discussion on the subject ensued, the result of which was that the shareholders, with the desire to strengthen the hands of the Directors, expressed their opinion that any outstanding subscriptions should be energetically followed up and payment forthwith secured.

Mr. FRANCKE then said that his inspection of the plant the Company was sending out to Ceylon, bad afforded him much pleasure; he fully endorsed all the Chairman had said as to its efficiency and the strength and excellence of its manufacture, and he considered that with such a plant the Company had every prospect of success before it. He wished to lay particular emphasis on the wisdom of the policy of the Directors in deciding to commence vigorous operations at once on a large scale. Past undertakings of a similar nature, both in Ceylon and elsewhere, had failed through the endeavour to work at first in a small and tentative manner with the mistaken idea that encouragement would be gained before facing the necessary outlay for plant adequate to ensure commercial results. He believed that encouraging results could never be obtained in this way, while expenses were all the time running on. It was far more prudent to commence with plant capable of making a return on the capital which would have, in any case, to be laid out, and thus put the success or failure of the enterprise beyond the possibility of a doubt in a short space of time. This course the Directors have decided to pursue.

Mr. LEOPOLD DAVIES spoke as to the necessity of all the shareholders loyally supporting the Directors in an enterprise of this nature, and in paying the calls on their shares promptly, so that the Directors might not be hampered in their use of the Company's working capital, and that the burden of providing it might fall equally on all. He also put a question with regard to the Directors' fees.

Mr. DUNCAN DAVIDSON, one of the Directors, in replying to the question as to the Directors' fees pointed out that they had not been drawn, but that he considered that Directors who gave their time and attention to the Company's business,—and he would like to say that this Company made very considerable demands in this way, which were cheerfully and promptly responded to,—were fully entitled to at least the small sums provided for by the Articles of Association, and that, as soon as the Company's finances warranted it, he was of opinion that they should be paid.

Mr. M. E. Wesley called attention to some points in the Balance Sheet, noting that he had accounted for all the funds at the Company's disposal, with the exception of a sum of £350 and asked if the Chairman could offer any explanation on the subject. The Chairman replied that the £350 to which Mr. Wesley had referred was the sum mentioned in the Prospectus as the cash consideration for the benefit of the Option for the Land, since exercised, and for the Patent Rights. Although not specifically mentioned, it was actually included in the balance sheet and accounted for to the satisfaction of the Auditors. He then asked Mr. F. L. Shand, if he could give the meeting any information as to Gemming in Ceylon.

Mr F. L. Shand, on rising, said he had spent 15 years in Ceylon, and knew the district in which the Company's estates lay thoroughly. He had been engaged in gemming on lands immediately contiguous to them and, referring to the map on the wall, he pointed to "Golden Grove," "Everton" and "Ranweltenna" as properties well worth the Company's attention, and he said that it would be important to ascertain whether the surface illum or gem-bearing gravel, which existed there and was very rich, extended over the Company's land. He believed it did. This gravel bed was well known in the district to be very rich. The best gem-bearing gravel is usually found in level country, and not where you have abrupt hills. He instanced a case in which he found a small patch of the surface illum which had escaped denudation on the hill-side owing to its being protected by the roots of a few tea-bushes, out of which he washed gems to the value of 560 rupees. He would like to know what reports on the Company's property had been obtained, he, however, had no doubt that, situated as it was, the illum there might be valued at fully 10s per ton. He had known £7,000 worth of stones sold at one time as the result of three months' ordinary basket washing in this district. The beautiful gems in the case on the table were, he could see, Rakwana stones and of high value. He had once picked up a gem in the district, by the road side, which sold for 500 rupees, and he had sold other Rakwana Sapphires at £10 per carat,

The Managing Director said that he was particularly pleased with the remarks which Mr. Francke had made as to the advisability of commencing work on a large and comprehensive scale, and with regard to the machinery he was well satisfied that it would accomplish the work necessary to ensure the success of the Company's operations. Referring to Mr. Shand's remarks, he said that the Company's ground had once been the bed of a lake, and was quite flat. It was well known that layers of rich illum existed in it, and the alluvial had been proved to a depth of 138 feet by a shaft sunk by the former proprietors. In reply to the question that Mr. Shand had put as to the Company's property, the most convincing report possible was the case of beautiful cut stones which he held in his hand, and would pass round for the inspection of the Shareholders. These, and many more like them had been found during the sinking of the shaft referred to. Sapphires of such quality were very scarce in the market and never commanded better prices than at the present time. As to the question of working the illum, it was not his intention to do much in the way of selection of the ground, but to pass everything that came to hand rapidly through the machinery. His experience in actual gem-mining, was that valuable gems were constantly found in ground adjacent to the recognized gem-beds, and he had found it most economical to take the ground very much as it came, provided operations could be conducted on an extensive scale.

The Chairman then announced that the adoption of the Report and Balance Sheet had been proposed and seconded, and he put the Resolution to the meeting. It was carried unanimously.

Mr. Francke then proposed the re-election of the Auditors, Messrs. Ball, Baker, Deed, Cornish & Co. for the ensuing year. This was seconded by Mr. Pallett and duly passed.

A vote of thanks to the Chairman for presiding at the meeting, was proposed by Mr. Edwd. J. Sargeant, and seconded by Mr. E. Wright, and the proceedings terminated.

AIDS TO AGRICULTURE IN CEYLON.

In commenting lately on the vast increase there would be in the production of Coconuts—valued at from R1,400,000 to R2,100,000 a year,—if the average on 200,000 acres be increased only by 5 nuts per tree, per annum, we declared that neither the Government nor the public had ever awakened to a proper sense of the importance and capabilities of the great Coconut Planting Enterprise of the Colony. By the public we meant, of course, the public as a whole; for individual members of the community—now an upcountry planter, then a Colombo merchant; now a lowcountry planter, then an enlightened retired Sinhalese public servant—as our columns, and specially the pamphlet on salt we recently published, show, have fully realised the immense gain there would be to coconuts specially and to the country generally, if salt were rendered available for agricultural purposes. Their efforts to move the Government were, however, unsuccessful; and it is not alone in connection with the question of salt that local authorities have failed to appreciate fully the importance of agriculture to the welfare of the whole country. This island is essentially agricultural, whether we regard the indigenous population, who have, from time immemorial, considered the cultivation of the soil as the most honourable industry, or the colonist, who has brought capital into the country to test its capabilities for coffee, cinchona, cardamoms, cacao, tea, rubber, and other products. Agriculture, therefore, is the mainstay of the island, the backbone of its prosperity; and yet, how grudgingly does the Government extend any help to the agricultural interest! We by no means assert that the planter, whether European or native, should be regarded as a disinterested philanthropist, and that he should be aided at every turn from the public funds, instead of being expected to help himself in the royal way which ensures a blessing. But what the Government too often forgets is that the planter—we use the word in a sense to include every agriculturist—is a public benefactor, in that, while he benefits himself, he in some way, and generally according to the measure of his success, benefits the country; that there are directions in which the Government can aid him, almost without any effort and almost at no cost to itself; that there are circumstances under which its help becomes an urgent duty, especially under conditions in which its influence and resources can command scientific knowledge and experience not readily available to the individual. We can recall the refusal of our Government a few years ago to avail itself of Mr. Ernest Green's services for work specially recommended by the Planters' Association; and it was rather grudgingly that, recently, official recognition was given to the same gentleman with a certain status as Honorary Government Entomologist, as if, in a little colony like this, every encouragement should not be accorded to those who develop a most uncommon, and yet most useful, aptitude for

patient scientific investigation. And then, after some show of readiness to help the cacao planter, —for which thanks are due to Sir West Ridgeway,—there has been a rather mysterious withdrawal, which has placed on a few private proprietors the obligation of securing the services of a Specialist to investigate a trouble in which every cacao plantation, large or small, is interested, and therefore the country generally. For, our cacao exports now represent a value approximating to one-and-a-half million of rupees annually. We do not underrate what Mr. Willis is doing to further knowledge on agricultural subjects, including the cacao pest; but he has proceeded rather on his personal initiative than at the instance of the Government. What we deprecate is the tendency of the Government to take too narrow a view of its responsibilities and duties, to look only to the immediate present, and to favour a strictly rupees-and-cents view of every question, even in regard to such comparatively light matters as the employment of a Scientist involving an outlay of five or six thousand rupees per annum. When the Island was under the cloud of depression, the Government added to the burdens of the taxpayers. That was, perhaps, in a way, inevitable; but it proceeded on the assumption that the best way of increasing the revenue was by the simplest expedient of doubling certain levies. Of course, its anticipations were not all realized in connection with the revenue from Stamps and Customs. Not only so; but an impulse was given to Crime, for when impowerished people found resort to the Courts to establish their rights rendered more difficult, they began taking the law into their own hands. The chief grievance, however, is that when prosperity returned to the island, there was no reduction or removal of the special levies. But rather, a new engine of taxation has been found—which many think will be widely used, should "depression" recur—in increased Railway fares. Take again the entirely unjustifiable enhancement by Sir Arthur Havelock of the Kerosine Oil Tax, to meet a contingency of his own creation. The apprehended deficit in the revenue did not happily arise from abolition, but when a reduction was applied for, and the interests of agriculture were specially pleaded in connection with oil engines which are a convenience on tea estates which have no firewood available, there was any amount of quibbling in order to escape an obvious obligation. Now, a reduction has been tardily granted, but applicable only to oil used for machinery!

But to return to the question of Salt, the revenue roughly makes a profit of R2 per cwt. a year on 450,000 cwt., or say a nett annual average of R900,000 by the monopoly. The production of a larger quantity cannot inconvenience in the least the Government which has the work chiefly done by contract, and has to arrange only for receiving the salt into its stores and for issuing the same. The probability is that the contract rates can be lowered for larger collections. The only reason advanced, in the past, against issuing salt at a cheap rate for agricultural purposes was that it could not be effectually denaturalized. The Ceylon Government was content to wait for an article that would render adulteration perfect, and it has renewed its refusal to help local agriculture during the 30 years that Germany has been strengthening the hands of her agriculturists by the issue of cheap salt. We have already expressed our thanks to the Government for the tardy and round-about concession of a Salt Committee; but we hold that, even if it is impossible to denaturalize salt, the Government would lose nothing by the concession. Assuming that the wealth of local Coconut produce is increased to begin with, by only R1,000,000 a year, would the planters concerned, be able to avoid contributing at least 1 per cent of their profits to indirect taxation? That would represent R10,000 a year—a handsome insurance against any loss from the use of cheap salt for culinary purposes! But it is not for coconut land alone that cheap salt would be used. Other cultivators would benefit by it, while salt would rid land of grubs and other insect pests, and cattle would thrive on a free exhibition of salt and be protected against disease. We bespeak, therefore, for our local Agriculture, not alone as touching salt, but in every way, a far more considerate and sympathetic treatment at the hand of our Government, as its truest wisdom.

AN AGRICULTURAL COLLEGE.

Ceylon is far ahead of the Straits in one respect, it possesses an Agricultural College, where we understand, several schools are being conducted, amongst which are those specially devoted to the seperate education of students in agriculture, veterinary, science, forestry, and dairy-farming. Quite recently a technical school has been added, with, it is said, the brightest prospects of success. Now if there be any particular knowledge of more value than all others in the Straits, it should be that concerning agriculture and forestry. And yet, there is no establishment or institution, of even the most humble character, where the local youth can acquire any scientific training in reference to those two important subjects. Consequently, the Straits aspirants to knowledge in that direction must needs go elsewhere, and, Ceylon being not far distant, they naturally migrate there for a season of instruction. One of these students, Mr. A. R. Jeremiah, has achieved the latest success, and it is about him that a Ceylon contemporary has been pleased to say a few words of well-deserved commendation, which we give elsewhere. Of the ten prizes, offered for competition at the Agricultural School, this youthful Scientist has secured those for (1) Senior class 1891, for proficiency in Agriculture. (2) Agricultural Chemistry and (3) Dairy Work given by the manager of the Dairy. He has been also awarded a first-class certificate for 1897. We congratulate both the student and his family; the former on having made the best use of his time at College, and the latter on having had the good sense to permit the youth to do first a profession suitable to his tastes, and to send him though probably at considerable expense, to the best available source of knowledge on the subject, required to be studied. Everybody knows how staunch a supporter technical Science had in Sir Cecil Smith, and we presume that the present Governor is no less ready to do all that might be necessary to promote the success of an institution devoted to the study of that and kindred sciences. Yet if the Straits Settlements and the Native States, are even to have Schools for Agriculture and Forestry the first movement in that direction must come from persons intimately associated with the practical side of the question. We must, therefore, look to Messrs. H. N. Rildey, C. Curtis, Leonard Wray, A. B. Stephens and Robert Derry and the numerous planters around us, to take the initiative, feeling sure that, afterwards the several Goverments in Malaya, if properly approached, will be easily persuaded to do all that may be required of them towards establishing an Agricultural College on lines suggested by the experts we have named.—Penang *Gazette*, Dec. 22.

TEA CULTIVATION IN CEYLON: OUR HEAVIEST-BEARING PLANTATION—MARIAWATTE—BEATING THE RECORD.

We are indebted to Mr. H. V. Masefield, Manager of the Ceylon Tea Plantation Co. in the island, for the figures of crop, and bearing per acre, realized by the Company's far-famed Mariawatte garden for last year, as compared with the returns previously published;—

Revised statement of yield of Mariawatte old tea from 1884 to 1897 showing average per acre, also yield of whole estate for six years showing average:

OLDEST AND SPECIAL FIELD.—Actual acreage in bearing 101 a. 1 r. 0 p.

Year.		Made tea. lb.		Yield per acre. lb.
1884	..	109,230	..	1,078 per acre.
1885	...	117,842	..	1.163 „
1886	..	105,925	..	1,046 „
1887	..	115,996	..	1,145 „
1888	..	106,410	..	1,050 „
1889	..	113,834	..	1,124 „
1890	..	140,144	..	1,384 „
1891	..	120,366	..	1,188 „
1892	..	119,909	..	1,184 „
1893	..	115,440	..	1,140 „
1894	..	110,448	..	1,090 „
1895	..	118,560	..	1,170 „
1896	..	113,360	..	1,119 „
1897	..	105,729	..	1,044 „

Average for above 14 years 1,137 lb. per acre.

YIELD FOR THE WHOLE ESTATE.

Year.		Actual acreage in bearing 458½ acres. lb.
*1892	..	643 per acre.
1893	..	817 „
1894	..	760 „
1895	..	886 „
1896	..	896 „
1897	..	926 „

Average for above six years 821 lb. per acre.

* Atgalla crops having been included prior to 1892 figures are not available.

We congratulate the Company, Mr. Masefield, and the Acting Superintendent of Mariawatte for last year (Mr. C. M. B. Wilkins) on the splendid result. It will be observed that over the whole estate of 458½ acres, the crop is the largest per acre—926 lb. made tea—ever gathered! It is in fact not only a "record" for Ceylon, but also for "the world." Nowhere in India or Java, we suppose, has 926 lb. (11 maunds) made tea, been harvested over so large an area as 458 acres? If we turn to the oldest field of Mariawatte, planted in 1879 and therefore in its 19th year, we find the crop shews a slight decline, but it still reaches the unprecedented figure of 1,044 lb. per acre for the 101¼ acres, against an average for 14 years of 1,137 lb. The average for six years over the whole estate is 821 lb., while 1897 gave, as we have said, no less than 926 lb. per acre.

TEA CONSUMPTION AND CULTIVATION IN RUSSIA.

Mr. R. Valentine Webster is surely a man to be envied and admired! Envied for the free scope given to him in travelling over this world's surface as an Agent and Advocate of Ceylon teas, and admired for the "pluck" and enterprise he has displayed in the discharge of his duty and for his special facility in the use of his pen as an amateur "litterateur." Here he is sending to the Ceylon press by far the most graphic and interesting, as well as instructive letter (see another page) that has ever reached us on the subject of Russia and its tea drinkers and growers. In half-a-dozen years, Mr. Rogivue and his colleagues did not manage to give us so vivid an impression of the country, the people and the "tea situation"; while Mr. Webster's expedition to the Crimea, to Batoum, the Caucasus and right into the preserves of the carefully guarded Government Tea Plantations, is unique and most interesting to every tea planter and tea merchant in Ceylon. As journalists in fact, we are inclined to think Mr. Webster has missed his vocation. He ought to be a special Press Correspondent and to climb up the ladder along which such men as Sir W. H. Russell, Archibald Forbes and Henry Stanley gathered fame. Probably, however, Mr. Webster, is quite content with his own particular calling and most heartily do we wish him the widest possible success in making Ceylon tea known and in extending its sale all over the habitable globe. Nowhere, do we wish to see such sales extend more freely than in Russia. Mr. Webster gives us much reason to expect rapid improvement during the next few years; while his account of the experiment of tea-growing in the Caucasus, shows there is no more to fear from operations in that quarter than in the Carolinas where indeed the climate is far more suitable. We thought the tea-bush a hardy plant when we saw it flushing in the open air in Washington at 39 degrees North latitude; but this is beaten by Mr. Webster's description of a tea field covered with snow! Then again the Chinese employé on the tea garden at £40 a month reminds us of the experience of the Messrs. Worms in Pusselawa in the "forties" when they got a Chinaman over to make tea from their Condagalla bushes; but dropped the experiment when they found the tea made, cost them £5 sterling per pound avoirdupois!

THE CEYLON TEA CROP FOR 1897.

Only at a very late hour as we are going to press, have we been able to get figures from the Chamber of Commerce final Export Return for 1897. We can only give the main results as follows:—

EXPORTS IN 1897.

			Total lb.
Tea for United Kingdom		..	98,930,059
Tea for Australia	..	..	13,258,456
Tea for America	..	..	830,873

Grand total to all countries 116,054,567 lb.

The first estimate made by the Planters' Association was 117,200,000 lb., afterwards raised to 119,000,000 lb. Messrs. Forbes & Walker fixed their's at 120 milion lb., and had it not been for exceptionally unfavourable monsoon experiences, we believe this figure would have been attained, as the best authorities in the island fully anticipated. But both in India and Ceylon first estimates had to be cut down as the year grew older.

PLANTING REVIEW FOR 1897.

TEA.—The past year has not been such a good year for planters as its predecessors. High rates of exchange, dear rice and a lower average of prices in the Local and London markets have upset many calculations. The yield has not been quite so much as expected. Such authorities as Messrs. Forbes and Walker and the Planters' Association made the forecast 119,000,000 lb. The result according to your contemporary, will

be 116,000,000 a little under 3,000,000 lb. Considering the weather, which has generally been antagonistic to flushing, I consider the estimates made by the leading authorities mentioned very close ones. The long-continued wet cold and sunless weather in S.-W. monsoon easily accounts the out-turn very less than expected. Up to July it appeared as if even more sanguine estimators than those quoted were to be true prophets, but the sponge had to be thrown up by end of October. Uva, I believe, will be found most progressive in 1897. The severe S.-W. monsoon in the Central and Western provinces carried moisture clouds into Uva, and this last province had not the prolonged dry showerless weather it generally experiences in the S.-W. Manufacture as a rule was well attended to. If not, it certainly was not the fault of Colombo and London Agents who continually were prodding up Managers of tea estates. I think, however, many factories have not sufficient withering accommodation without which it is impossible to have that fundamental operation in tea manufacture *an even wither*.—As we have had so many obstacles to contend with in 1897, we may have on the see-saw principle a good time of it in 1898 for tea planters : so mote it be—

[We have added in the correct export figures n each case.—ED. *T.A.*]

			lb.
Exported Tea	1895	..	97,939,871
Do.	1896	..	108,141,412
Do.	1897	..	116,054,567

COFFEE.—The price of this staple has been lower during the past season than it has been for some time. Fortunately, Ceylon is not much affected by this for we have so little to export. The leaf disease is quite as bad in the few acres of coffee left, as it was when we had thousands of acres, so a revival of this product is not likely to take place.

			cwt.
Exported Coffee	1895	..	63,920
Do.	1896	..	22,747
Do.	1897	..	19,383

CACAO.—The disease which commenced to be talked about last season has made such strides, that scientists are now in our midst. Where you have soil and a climate adapted for the cultivation, we have planters who are quite pleased with the returns they get. "Supply, supply, supply" is their motto. Cacao is not like tea or coffee when the old bushes are so close that supplies have no chance. Supply with a hardy variety, and the results, say the favoured cacao planters, are successful. The action taken by the Proprietor and Manager of Wariapola ought to put to shame our lethargic Government, who after repeated prodding at its tough hide, on the part of the Planters' Association, labours like the mountain labouring and with the same result a ridiculous mouse,—munificently designates Mr. Green an Honorary Government Entomologist, and gives him a small honorarium. How differently does the Indian Government act when any of their Agricultural Products are threatened.

			lb.
Exported Cacao	1895	..	27,420
Do.	1896	..	31,366
Do.	1897	..	34,503

CINCHONA.—Alas we have none of this product to benefit by the higher prices now ruling :—

			lb.
Exported Cinchona	..	1895	921,085
Do.	..	1896	1,309,560
Do.	..	1897	653,346

CARDAMOMS.—A limited cultivation, but those who are fortunate to grow the article, look very happy :—

			lb.
Exported Cardamoms	1895	..	374,635
Do.	1896	..	452,595
Do.	1897	..	532,830

OUR STAPLE EXPORTS FOR TEN YEARS AND DISTRIBUTION FOR 1896-97.

We direct attention to the interesting tables given as a *Supplement* last month as compiled from the Chamber of Commerce return. We have already noticed the figures for tea and explained how the increase between 1896 and last year is 3 million lb less than between 1895 and 1896. Our table looks well however with the exports of tea running up from 24,381,296 lb in 1888 to 116,054,567 lb in 1897. As regards distribution, Australasia treats us well in taking 2,200,000 lb more last year than in 1896 (or over a fourth of the total increase). America only shows an increase of 112,000 lb direct but to this, undoubtedly 320,000 lb more entered to "China" should be added. So that America altogether takes direct (apart from U. Kingdom tea re-exports) 1,520,000 lb. The Export to Russia has greatly improved, showing 200,000 lb advance last year and so has that to Germany and to Africa, the latter export now standing at 265,480 lb. Leaving out the United Kingdom, Australasia, India (which continues to take close on a million lb.) America, Africa. Singapore, Mauritius and Malta, we get the totals for the CONTINENT OF EUROPE of tea sent direct as follows :—

	1896	1897	Increase
Tea Exports lb.	617,345	937,529	320,184

Our poor old staple coffee makes a very poor show in 1897, but strange to say the export of 1888 was only twice last year's though in the interval we rose to nearly five times that quantity. Very different is the case with cinchona bark which has run down from 12½ million lb. to 650,000 lb in the ten years. Cacao, on the other hand, shows a steady advance from 13,000 to 34,000 cwt., nearly all sent to London. Cardamoms too have nearly doubled in export in the ten years, the shipments being divided between London and India with an appreciable quantity 30,290 lb to Germany direct. We must leave the more purely native Exports for notice later on, save that we cannot help attracting attention to the grand show made by the products of the coconut palm, more especially in oil, copra and desiccated produce. A thousand pities, that the richest coconut region in Ceylon should not have its railway before seventy miles of unoccupied, uncultivated country which could so well wait !

OUR PLANTING DISTRICTS IN 1897.

Reports from well-known residents in nine additional districts will be found on our third page today, and deserve attention. They range from Madulkelly to Lower Dimbula and from Madulsima to Rangalla. It is cheering to learn by the last-mentioned of the faith felt in the future of cardamoms and the probability of an extension of cultivation. The attention of a member of Council is directed to what is said in correction about road-making in the days of Major Skinner by one who ought to know : indeed we can ourselves testify that never was better work done on the roads than during the days of Ceylon's great Road-maker. Criticism of roads

or of official action, and suggestions for improvement will be found in nearly all the Reports—and more especially in that for the Kotagalla division of Dimbula. Motor Cars electrically driven are suggested by a Wattegama planter, the power being taken off periodically from a storeage factory placed near a good waterfall. This is, of course, quite a feasible idea, which may be realised freely in the country by-and-bye. It is not pleasant to read how the railway slip sent more of the Uva planters to the Hambantota and Ratnapura cart outlets. Our Gampola reviewer has much to say about the usage and law regulating labour: a higher stamp on "tundus" is a feasible and probably good idea if it kept coolies steadier at work. Fifty-four applications for one vacancy of Superintendent is a big order; but we can quite believe it. North Travancore should take off some more of our trained planters.

PLANTING NOTES.

Rat Coffee.—W. K. Brooks, the naturalist, in an article contributed to *Scribner's Magazine* some time ago, on "Aspects of Nature in the West Indies," states that the natives of Jamaica claim that their coffee is the best in the world, and that which grows on the sides of the high mountains is the best in Jamaica, for in high altitudes it acquires a rich flavor, which commands the highest prices in the English market. We are told, however, that the quintessence of all the *rat coffee*, or the seeds from berries which have been gnawed by rats, for these animals are very fond of the aromatic pulp of the cherry-like fruit which encloses the seeds; and as their fastidious taste leads them to select the best, children are employed to gather among the bushes the berries which they have gnawed, and this coffee is set apart as the finest and most delicious of all.—*American Grocers' Journal.*

Cacao Cultivation in Ceylon.—We omitted yesterday to call special attention to the excellent and re-assuring letters from practical planters in answer to the London paragraph of a Ceylon cacao pessimist which we quoted the other day. We were of course aware of the old trees in Peradeniya Gardens, in Kandy town, and in front of the Palakelle bungalow; but a few detached trees growing in this way cannot be taken as a fair test of a field or "cacao walk." Still it is quite evident from what our correspondent says that there is no reason to fear dying out in the latter case when proper land has been selected and the plants put in and treated judiciously. The very fact that our export in 1897 shews so large an increase—15 per cent above that of 1896—may be taken to indicate that "the cacao industry" has come to stay with us.

The Ceylon Land and Produce Company.—We can do no more today than call attention to the summary of the Directors' Report for this Company. It is a very full and extremely satisfactory document, and we congratulate the shareholders on once more getting 15 per cent of dividends—a rate that has continued without interruption since 1892 and this notwithstanding that cocoa has fallen from 96*s* 5*d*. average per cwt. in that year to 66*s* 1*d*. in 1897 and tea from 7·81d. to 6·51d. per lb. The crops have however, increased: cocoa from 1,431 cwt. in 1892 to 2,266 cwt. in 1897 and tea from 503,293 lb. (average 364 lb. per acre) to 748,994 lb. (average 476 lb. per acre) in the same periods. Mr. James Wilson, the Chairman, of this prosperous Company is now in Ceylon and he reports favourably on the prospects of 1897-8.

Cinchona Prospects.—A Java correspondent writes as follows about Cinchona:—

"Cinchona continues to rise, the price of the unit being per last telegram 7 cents (1 2/5d) to 8 cents (1 3/5d) at the Amsterdam auction, and higher rates being realized for lots sold privately. This is a big rise from 2½ cents in March of this year, and thanks alone to the starting of two Quinine Factories out here, which have for the moment broken the back of the German ring, who for the last 4 years have made the price just what they liked."—Batavia, Dec. 15.

The Ragalla Tea Estates, Limited.—The Directors' Report dated 24th December last will be found on another page and affords very full information respecting the Company and estates. Dividends were paid up to July last; but for the current year, the Directors report they cannot declare a dividend on the ordinary shares. They are, however, very sanguine about prospects in the near future with young tea coming into bearing, a new factory, &c. Certainly Ragalla and Kelburne are both very valuable properties, and ought to do well.

A New Product for Export.—Not long ago we stated that there was a good business done between Colombo and the Persian Gulf ports in coffee husk, which was practically refuse thrown away by planters after pulping and cleaning the coffee berries. The Arabs, especially, make use of the husk in place of the civilized preparation of *café noir*. We now hear that, besides coffee husks, dried cardamom husks have a marketable value, and that shipments of these are being made to some Continental ports. In grading the cardamoms, the "splits" are utilized for this purpose after "seeding" them, and the husks can be placed on the market without being thrown away as refuse. Planters would do well to note this fact, and, in sending the different grades, to add "husks" to the existing classification.—Local "Times."

"The Agricultural Annual and Mark Lane Express Almanac for 1898" has just been issued from the office of this worldknown journal. It contains, as in former years, a series of articles on topics of interest and profit to farmers, the contributors being experts in their different departments. Amongst the more notable will be found one entitled "Can the Empire Feed Itself?" by Mr. C. Kains Jackson; "Malt and Manure," by Mr. H. Stones; and "Extended Stock Farming as a remedy for Depression," by Mr. J. Darby. The importance of "Chemical Analysis" to the farmer is pointed out by Mr. A. E. Sibson, and Mr. T. Ironmonger describes, "The Position of Foreigners in the Hop Field." An important contribution is one on "Teat Troubles," by a Member of the Royal College of Veterinary Surgeons, and Mr. Sanders Spencer explains the great use and profit of "Grass as Food for Pigs." Mr. W. Scarth Dixon describes the "Cleveland Bay, and their Place on the Farm," and Mr. E. G. F. Walker treats of "The Seamy Side of English Dairying." Other topics are "Small Fruit for Small Growers; by Mr. G. H. Hollingworth; and "How to Combat Foul Brood in Bees" by Mr. C. N. White. Mr. J. T. Critchell directs attention to "Australasian Food Exports to Great Britian," and their relation to the food supply of the Kingdom, whilst Mr. J. B. Simpson contributes an interesting article on the "Future of the Leicester Breed of Sheep." The Editor (Mr. A. J. Stanton), as usual, contributes a summary of "Agriculture in 1897," which will be read with considerable interest, as setting out the principal events of the year The Annual is well illustrated, and more profusely so than ever, the pictures being up-to-date, including Mr. Wortley's cross-bread steer "General," which took champion prize at the Norwich, Birmingham, and Smithfield Shows this winter. The frontispiece is an admirable portrait of the Rt. Hon. Earl Spencer, K.G., President of the Royal Agricultural Society of England.

The Planting Districts in 1897.

HANTANA DISTRICT IN 1897.

WEATHER.—On the whole it has been a fair average year. A capital season for planting and supplying though it was perhaps a little late before it could be begun. There has been an absence of very heavy rain: and burst drains, washed away roads, and scoured out ravines, have not been in evidence to any extent; land-wind has been wanting in energy, and not so prevalent.

CROP.—Estimates ought to be secured if they have been carefully made.

LABOUR SUPPLY.—Has been sufficient, and of a good quality.

TRANSPORT.—Many estates have their own carts, and those who have not. had to pay enhanced rates owing to the rise of price in all foodstuffs.

ROADS.—Nothing to brag about, and those in and about Kandy were never worse.

RICE AND OTHER SUPPLIES have been at famine rates pretty much. When the derangement of trade, owning to the plague precautions, had made itself felt in a general advance of price, the situation was intensified by the rock-slip on the railway, and any rag of conscience which the Moormen traders had left was then lost for good. There was no attempt to get a fair profit, and so grasping did the traders become that there was more than one occasion when the kaddies were in danger of being looted. This fear was the only thing that there was to check their capacity, and even with it, what they did demand was unmerciful.

GRIEVANCES.—I have not any. If I were only to think a little no doubt something might come to my mind which might serve as a plaint; but like the nation which is happy in having no history, so is the district happy which has no grievance. But Hantana is not quite that yet. Round about Kandy, there are a number of planters who have to serve on the jury, and too close to town to get any batta at all from Government for their work. When the Court is sitting they have to use their own horses to come in with: when it adjourns for tiffin they have to spend their own money or go without the meal: and if the trial be a long one, and the sitting is late, they have to find their way home in the dark, or pay for hotel accommodation. The Government takes every thing out of them, and gives nothing. They are the hardest-gronnd section of the jury world which I know of—and deserve some consideration, but get none. A man may during the time he is a juror have to travel 100 miles or more, and get no allowance, may have to eat half a score of Queen's Hotel's tiffins, while labouring for the public good, and have to do it at his own expense: have three or four nights in town, and yet if he asks for batta, or suggests carriage hire, he is smiled blandly at by a Civil Official, and is told the thing is not possible. Why not possible? Ah! that's the rub. It would be difficult to establish the justice of the act, or give sound reasons why the elect few should be so systematically neglected and preyed on.

LOWER HEWAHETA AND HANTANA SOUTH.

WEATHER this year has been favourable.

CROP.—All the year the crop has come in well and estimates were generally exceeded.

LABOUR SUPPLY.—Owing to the district having its own federation, labour seems more settled and the supply seems ample for all requirements.

TRANSPORT has been as usual.

ROADS have been in very bad repair all through the year.

RICE AND OTHER SUPPLIES have been sold at increased rates on most estates owing to heavy prices ruling.

GRIEVANCES have been few and far between; but what have arisen, have been due to arrack.

REMARKS.—The area in tea in this old district must nearly equal the coffee area of the old days.

AMBAGAMUWA DISTRICT IN 1897.

WEATHER generally not unusual for this district.

CROP.—Estimates have been a little short, but not to any material extent. Finer plucking business for it!

LABOUR SUPPLY very good. Advances a bit stiffish; a certain firm alone has to be blamed for this cause, which never existed before.

TRANSPORT AND ROADS.—Roads were never in better order. Great credit is due to Mr. Ward and his staff for the upkeep of roads.

RICE AND OTHER SUPPLIES very expensive. Unless the Chetty and Moormen clique are overcome by some other means it will be disastrous to the tea enterprise to let it go on longer.

GRIEVANCES.—A permanent Magistrate for Gampola and Nawalapitiya a *sine quo non* and medical officers stationed in the district should on no account be taken away to act for others, and this vast district left to the tender mercies of under-strappers, and why do not the Medical Department have a man stationed in every province for relieving duty? Surely he can be well employed when not acting for a D. M. O.

KNUCKLES DISTRICT IN 1897.

WEATHER.—RAINFALL:—January 6·48, February 3·55, March 2·08, April 14·40, May 6·05, June 15·15, July 4·80, August 11·03, September 9·01, October 9·5, November 17·51, December.

CROP.—The tea flushed well to June, but the flush has been very short the last six months.

LABOUR SUPPLY.—Short.

TRANSPORT AND ROADS.—Expensive owing to the railway slip and the bad condition of the roads.

RICE AND OTHER SUPPLIES.—Rice has been very dear.

PUSSELLAWA DISTRICT IN 1897.

WEATHER—generally has been favourable for tea. There was a marked absence in comparison with previous years of high wind in the early part of the year. The advent of the South-West monsoon was rather abnormal, but when once clearly established we had some very severe bursts of strong wind which did no little damage. Rain has been more evenly distributed than usual and in comparison with former years considerably more has fallen.

CROPS have been up to the mark and estimates generally secured.

LABOUR SUPPLY has been ample throughout the year, employers generally combining to help one another.

TRANSPORT.—In some cases there has been a good deal of foot-and-mouth disease and carts have not been so freely available at all times as previously.

ROADS are going from bad to worse, and though attempts have been made towards repair, these have been of a very temporary and inadequate character.

RICE AND SUPPLY.—Prices for these have ruled exceptionally high throughout the year, reaching famine prices during the first short period after the Railway slip at Alagalla; Chetties and traders throughout the district taking advantage of the ignorance of the native population in keeping up prices long after the necessity, *so called*, to do so.

GRIEVANCES.—Telegraph station at Ramboda is very desirable. Hospital accommodation and a new dispensary for Pussellawa District absolutely necessary. More adequate grants for upkeep of roads keenly wanted. A resident Police Magistrate urgently required, and the abolition of tolls at Gampola bridge and Pussellawa town longed and prayed for the necessity of such obsolete and barbarous taxtion being out of all proportion to any advantage gained in having easy lines of transport communications.

MORAWAKA DISTRICT IN 1897.

TEA CROPS.—Mostly short of estimates, chiefly owing to want of labor early in the season.

LABOR SUPPLY—has been very short on many estates till quite recently, when in common with the

t of Ceylon, we benefitted by the influx from the st.

TRANSPORT.—The improved MacBride system has been responsible for our cart hire going up 25%, but our new District Engineer (Mr. Clementi Smith) is putting matters right. Transport of rice and tea to and from estates not served by roads is a matter of infinite difficulty and great expense.

ROADS.—During this year a grant-in-aid road from Deniya to Anningkanda has been finished, and extension will now be made to Hayes and later on, it is hoped to join the Rakwana road at Lauderdale.

RICE AND SUPPLIES.—The former rose to R5, and was scarce even at that for some time; other supplies have been dear. Supply of meat and bread is indifferent and uncertain.

GRIEVANCES.—Want of a police force and a proper resident headman, also a telegraph station (wire could be taken across to Rakwana, 10 miles). Hospital at Deniya should be finished sharp, as the present system of carrying sick coolies to Matara is inhuman. The balance of the Government land not required for public purposes should be sold and the country opened up by means of cheap roads, so as to render it available for Tea and other products.

KOTMALE DISTRICT IN 1897.

WEATHER GENERALLY.—The rainfall was about the average, but the N.-E. monsoon was a failure.

CROP.—Most estates were a little short of their stimates.

LABOUR SUPPLY.—Was sufficient except in the very busy months, April and May, when Sunday pluckings for cash had to be resorted to.

TRANSPORT.—Most estates keep their own carts, and as the farthest estate for Nawalapitiya is within 13 miles, no difficulty was experienced.

RICE AND OTHER SUPPLIES.—Always obtainable at Nawalapitiya, except when the slip occurred at Alagalla, then the Chetties, &c., raised their prices to exorbitant prices.

ROADS.—The main road was kept in very fair condition, branch road (Kataboola to Tyspane) especially, the last mile is very bad.

GRIEVANCES.—None that I know of. *Mirabile dictu!*

REMARKS.—Happy and Prosperous New Year to the *Ceylon Observer* and especially to the veteran Editor.

PASSARA DISTRICT IN 1897.

WEATHER—Rainfall 115 inches.

CROP 2,500,000 made tea, bearing tea 5,821. Total 8,700.

LABOUR SUPPLY 7,000, shortly wanted 9,800 coolies.

TRNSPORT via Bivella Rail 1·45 cart ·55=2 carts.

ROADS.—N. Kula Doomoo Gap Road Madulsima progressing.

RICE AND OTHER SUPPLIES very dear.

GRIEVANCES.—Want of cheap transport.

REMARKS.—Rail charges on rice higher than on tea; shameful simply.

WATAWALA DISTRICT, 1897.

Around here, we are not sorry to say "off with the Old Love and on with the New." A hearty good-bye to Old 1897, as he fast expires! He might have been a good deal worse to us, and he might have been much better. A rather dull uninteresting old chap he has shown himself on the whole.

LABOUR.—To his credit be it said that he greatly improved our Labour Force, so that he leaves our estates, and district roads, &c., in good cultivation and order; but, what he gave with the right hand, he took back with the left; as with his gift of extra coolies, he gave an extra dose of wet and sunless weather which has left its mark on us and our crops.

CROPS.—Talking of crops, a few of the lucky "totums" have got over their estimates, as many more have only managed to secure them: while the greater number seem to be just a shade on the wrong side; so, on the whole, the district will probably be found a little, but not greatly, short.

TRANSPORT.—Fortunately, with our ample and good roads, new station at Rozelle, &c., we are able to get our crops off cheaply, and get easily about, when we feel so inclined.

GRIEVANCES.—The one thing we lack, in the way of public conveniences, is a Central Telegraphic Station at the Post Office, to save us having to send to Hatton every time we need to "wire"; and we look to 1898 righting this.

RICE has been abnormally dear, as in other districts; but, now-a-days, with easy transport and facilities for buying from European Importers in Colombo, the planter who pays too much for rice may blame himself chiefly.

On the whole, we may close as we began, and say that 1897 here might have been worse; and had it and its predecessor not taken away so many of our oldest and well-liked neighbours, it should have had a fair place in the annals of "Old Ambegamoa."

R. I. P.

TWENTY MILES WEST OF THE PEAK.

Dec. 25.

WEATHER:—

1st Quarter 1897	—	32·31	inches.
2nd	,,	68·29	,,
3rd	,,	51·29	,,
4th	,,	15·37	,,
		167·26	

20 inches above average.

There were 35·19 inches in September, nearly twice the average; October 9·71 or about one-third the average: November 7·20 two-thirds the average.

1897.

Jan.	3·35 in.		July	12·23	above
Feb.	4·84 ,,		Aug.	20·87	above much
Mar.	7·18	normal	Sept.	35·19	above very much
Apr.	18·82	below	Oct.	9·71	below very much
May	11·95	normal	Nov.	7·20	below very much
June	20·42	above	Dec.	15·70	above

Total—167·26 inches, or above four years' average.

	Jan.	Feb.	March	April	May
1894	2·12	2·85	4·78	19·93	5·48
1895	5·72	4·06	9·55	20·46	12·36
1896	5·27	2·35	12·07	10·88	14·86
1897	3·35	4·84	7·18	18·82	11·96
	June	July	Aug.	Sept.	Oct.
1894	22·57	6·03	7·09	7·88	16·33
1895	14·37	5·18	10·37	22·81	22·08
1899	18·09	6·67	17·55	16·15	27·20
1897	20·42	12·34	4·26	13·09	13·80

Heavy squalls in S. W. monsoon, especially in July and August. November and December gloomy.

CROP.—Least said, &c.

LABOUR SUPPLY.—Village labour chiefly, very irregular and unreliable.

TRANSPORT.—Two miles by coolies, thence river and canal.

ROADS.—Private path bad; public roads tolerable.

RICE AND SUPPLIES.—Prices very high; Ratnapura the dearest outstation in the lowcountry.

GRIEVANCES.—None that can be mended by a row.

ELPITIYA DISTRICT, (S. PROVINCE,) IN 1897.

WEATHER generally.—Very ordinary; rainfall consistent and satisfactory, although slightly below average.

CROP.—Slightly under estimates as a rule. Yet deficiency due more to overestimating than to natural causes.

LABOUR SUPPLY.—Sinhalese labour plentiful, and rates considerably higher than need be owing to reckless competition.

TRANSPORT.—Available at all times. Carts really to meet all demand.

ROADS.—In good order.

RICE AND OTHER SUPPLIES.—Supply always procurable although rates are high, nevertheless they compare fairly with quoted rates in newspapers.

GRIEVANCES.—None, but those that emanate from imagination and self-caused indifference.

Remarks.—A happy valley that would be happier with more cordial co-operation for general good of proprietors.

MARAWILA DISTRICT (CHILAW) IN 1897.

Weather generally.—We had rain during every month of the year, with very heavy falls of 8 and 12 inches.

Crop.—Coconut and paddy crops have been good.

Labour Supply.—Scarcity of Tamil labour all over the district. Sinhalese unreliable.

Transport.—The canal is the only means of through transport and on the whole it was in good navigable order except at Negombo, where it gets silted up with each rise of the Maha Oya.

Roads.—There being very little heavy traffic on the main road, it was in good order. The old road was in fair order. Minor roads require attention.

Rice and other Supplies.—Supplies sufficient, but prices very high and press heavily on the poor.

Grievances.—A more vigorous administration, viz., an A.G.A. untrammelled with judicial work.

Remarks.—Badly served as regards mails. We have one mail either way and letters that reach Negombo one evening for districts northwards are forwarded the following noon! Two coaches leave Negombo together at noon and two leave Chilaw in the mornings. We want a mail for Negombo in the mornings, and from Chilaw in the afternoon. Our greatest want is a light line passenger railway.

BATTICALOA DISTRICT IN 1897.

Weather generally abnormal: too wet during the early and middle of year; too dry at the beginning of N.-E. monsoon; too wet now.

Crop.—Under the average.

Labour Supply.—As usual.

Transport.—As usual.

Roads.—In fair order.

Rice and other Supplies.—Prices very high.

Grievances.—Continual change of magistrate and D. J. Want of communication with outer world.

Remarks.—When the railway has been extended to Batticaloa, and the old Dutch Bar is re-opened, this place will be only second to Colombo in importance. It is destined to be the great rice-producing district of the island, and it only wants facility of communication by land and sea to develope it. Coconut cultivation has been largely extended during the past year. The trees do not yield so much and do not last so long, as in the wetter portions of the island, but they make up for this by producing better nuts. What the district wants more than anything else is fresh blood and competition, and this it will not get, until it is easier to get in and to get out of it.

RANGALA—MEDAMAHANUWARA AND NITRE CAVE DISTRICTS IN 1897.

Weather.—The weather throughout the year was very favourable, no long spells of either rain or drought. Both the South-West and North-East monsoons were mild. The rainfall varied on different estates from 98 to 150 inches.

Crops.—Tea and cardamoms were above the average, especially the latter, which has been a record year.

Labour.—With no great shortage we could have given employment to a few hundred extra hands. Sinhalese labour comes as a great help in pruning and all odd jobs. The arrivals from the Coast on his side have been few.

Transport.—The majority of estates have a coolie and tavalam transport to cart road of from 3 to 7 miles. Coolies dislike the work and will not stay where the work is heavy.

Roads.—Our cart roads have been kept in fairly good order, but more might be done in putting down a larger quantity of metal and not cribbing it from the sides of the roads. The beginning of the year saw our roads all smashed up by the great rainfall in the latter part of December 1896. We hadly want a few short extensions to make transport easy.

Rice.—We were kept well supplied, but the price was very high and likewise all Ramasamy's curry stuffs &c.

Grievances.—We have one great grievance. Our Grant-in-aid cart road from Nugatenna to Koboneille is to cost us 3/4th of the total expenditure; Government only paying 1/4th. We cut the road and at the last moment Government refused the half of the cost, and now charge us one-half the expenditure for laying down the metal and finishing it.

Remarks.—Coolies were fairly healthy and are taking kindly to hospital, some of them are even anxious to go to it. The birth and death rate was normal. Factories were enlarged on a good many estates; a large new one built on Deanstone; and wire shoots are coming into favour. The tendency was to pluck finer all through the year. Very little new land was opened for tea; but longing eyes were cast on every available acre for cardamoms; we are beginning to find that cardamoms are more permanent than we at first thought and there is no doubt we will take to manuring them before long and also replant old fields.

MADULKELLE IN 1897.

Weather.—Very favourable for the first six months but quite the reverse for the latter half of the year; a fairly fine June being followed by three almost sunless months, with low temperature on the higher estates and consequent check to vegetation generally. Almost all estates have made less tea than in 1896, some very much less, and those which close their accounts to the 30th June, will have to reduce their estimates considerably.

Labour.—Plentiful on one or two estates, but most people would be glad of more coolies.

Transport.—Almost all estates employ their own carts or contract for the regular hire of the carts they require.

The Road gets worse every year, for the simple reason that sufficient money is not spent on its maintenance and that the work done is badly done. The form of the road is to a great extent lost, and in heavy rains, where there is a steep incline which is pretty general above the 7th mile stone. The water runs down the road instead of into the side drains, ploughing out deep ruts and washing away metal and "blinding" together. These ruts are roughly filled up with metal, to be washed out again with the next rains. The road above Panwila was thoroughly well made originally by the old pioneer corps (though the trace is bad) being, like the magnificent road from Ratnapura to Badulla, all firmly paved with large flat stones below the metal. Had it not been so, it would have been cut through long ago. I mention this as Sir J. Grinlinton's remarks in Council seemed to imply that work was better done now than formerly; quite a mistake.

Rice has of course been dear and a heavy loss has fallen on most estates, it having been issued to coolies at rates ranging from R4 to R4·40 per bushel. There was some scarcity at the time of the railway slip and some estates had to send their men to Wattegama and Matale in October.

EAST HAPUTALE IN 1897.

Weather.—The rainfall has been over 100 inches, rather more than the average and too evenly distributed for coffee, but very suitable for tea.

Crops.—Coffee a vanishing quantity; tea a good average.

Labour.—Plentiful on most estates.

Transport.—Cost of transport has shown a tendency to rise during the year.

Roads.—Minor roads in fair order. The Ampitiyakanda Gap Road is to be re-surveyed and will then if all goes well be constructed from Bandarawela to Leangawela factory.

The effects of the slip have not perhaps been felt so much here as in some other districts as we have alternative routes of supply by Hambantota and Ratnapura.

REMARKS.—Estimate for Haputale for 1898, 4,000,000 lb. from 10,000 acres in hearing.

KANDAPOLLA DISTRICT IN 1897.

We have had about an average rainfall; the S.-W. monsoon was mild, and we did not have as heavy wind as usual. It has been a good year for tea crop; and coffee what there is of it, has done well.

LABOUR seems settled and has been fairly abundant. The tramway from Nuwara Eliya is the great want of the district.

UPPER HEWAHETTA DISTRICT IN 1897.

WEATHER.—Generally favourable.

CROP.—Above the average.

LABOUR SUPPLY.—Sufficient except during the very busy months.

TRANSPORT.—Is also as usual except since October, when higher rates have been sought owing to the increased cost of food stuffs due to the rock-slip on the line.

ROADS.—The Government road from Rickelegasgoda to Kandy 20 miles, is in bad order, and has been so for the past two seasons. Too much metalling is taken in hand at one time, which as the road is of a very steep gradient over more than half its length, makes it hard on the cart cattle, and the complaints of the drivers are just.

RICE AND OTHER SUPPLIES.—All ample.

GRIEVANCES.—Delay in delivery of postal letters, the runners taking 12 hours and more in covering 23 miles, Kandy to Hewahetta *via* Deltotta, whereas an allowance of 7 hours, even, would be ample.

MADULSIMA IN 1897.

WEATHER.—The past year has been rather exceptional in the abundant supply of moisture during our usually dry months, and also in the long-deferred arrival of the N.-E. monsoon, which really only set in properly at the beginning of December. Since then the rain has been almost incessant, nothing very heavy, but more continuous than I ever remember.

TEA has flushed well and many places have exceeded their estimates mainly owing to the unusually forcing weather. Since July, prices generally speaking for our teas have been good, one or two estates as usual showing up well in the London sale lists.

LABOUR.—There does not seem to have been nearly so much trouble with labour as in previous years. Coolies and kanganies are, I think, beginning to realise that pleasant as may be the spending of that extra advance screwed out of their unwilling Dorai, yet the day of reckoning comes before long, and the more sensible among them realise that they gain nothing in the end by moving about from place to place increasing their debts with each change.

The extension of our CART ROAD is being pushed on and the energetic District Engineer Mr. Arnasalem is deserving of great praise for the excellent work done.

Had it not been for the stupid advocacy of another trace by a resident in the district, backed up by a late Government Agent who never took the trouble to examine the trace on which the road is now being cut, this extension would probably have been taken in hand several years ago. The main sufferers are the estates in Hewa Eliya, who now transport their teas to Lunugala, at a cost of 1½ cts. per lb. for the eight miles journey. Such is the unfortunate result of one man endeavouring to impose his will on the district.

WATTEGAMA DISTRICT IN 1897.

WEATHER.—Rainfall 14 inches over average; November and December very hot.

CROPS.—Generally good all round. December rather short.

LABOUR SUPPLY.—Ample generally.

TRANSPORT.—Rates nearly doubled in some cases owing to state of roads; severely tested by heavy plumps in December.

RICE AND OTHER SUPPLIES.—Cost influenced by slip on incline.

GRIEVANCES.—More work wanted on roads and more labour to do that work.

REMARKS.—An enterprising firm (like say Boustead & Co.,) is wanted to start Motor Cars for transport on some of the awful roads now common in Ceylon, with central electric power station, at the big waterfalls in the districts.

LOWER DIMBULA IN 1897.

WEATHER—Has not on the whole been very favourable for growth; especially was this the case during July, August, September and the beginning of October. Tea pruned during these months took very long to come into bearing again, perhaps longer than I ever noticed before. During November and the first half of December flush came on with a rush but unfortunately it shut up a good deal again from the effects of cold wet weather in the latter half of December.

CROP.—In proportion to acreage I do not think crop will be large; but I think the quality on the whole has been above average, notwithstanding the poor averages ruling.

LABOUR SUPPLY—Rather scarce the first six months of the year, but fairly plentiful during the latter six months. The outturn seems to be poorest always during the busy months.

TRANSPORT.—An accommodation cart-road is badly wanted to the station at Kotagala from the North side; the only approach from that side being a narrow bridle path, with a large stream to cross and the bridge generally unsafe for a horse.

ROADS.—The condition of the roads has improved of late, but more roads are required, to shorten transport to station.

RICE AND OTHER SUPPLIES.—In spite of the slip there was no actual want of supplies, though the Chetties and bazaar-keepers tried to run famine prices. Prices and Railway rates have been very high.

GRIEVANCES.—Want of direct cart road to station from the North; a road could be got to station that would halve the distance and make an easier road. Platform and waiting-room accommodation at stations is inadequate.

GAMPOLA DISTRICT IN 1897.

A Happy New Year and a prosperous one to you all and all good wishes if not too late.

Reviewing the past year it must be admitted that it was one of the most anxious for all connected with the tea enterprise, since we began some 15 years ago, when we were all glad to listen to men such as Armstrong and Cameron and when we devoured with avidity everything they told us, old planters, about our new "Queen Tea." The year without doubt, has been a disappointing one to very many; but, after all it was more the rise in silver than any reduction in our average prices people felt.

WEATHER.—The weather generally has been all that could be wished; but the N.-E. plumps were not quite as heavy as usual. Taking it all through, the S.-W. was not a good planting one; but rains in the N.-E. enabled those who had planting and supplying to get both done in good time

CROPS.—The estimates as a rule were pretty well secured though a few will be short. Prices both home and local have been miserable and those buying leaf and making tea for others had difficulty in making ends meet and in view of lower prices; the superintendent who sticks to his estate and keeps cost of lb. of tea as low as possible will command a decent billet. There are a great many men out of work just now—some 54 applications having been made lately for one vacance and that a temporary one! Cost of leaf during the year was about 6½ cents per lb. and poor stuff it was. At our P. A. meeting on the 11th December, it was decided to reduce the cost of cash plucking to 1½ cent per lb. This is I think a fair rate to pay now and the Sinhalese

ave had a very fair time of it getting all along 2 cents per lb. Superintendents must be unanimous, however, and the agents should insist on the reduction as it makes fully 2 cents per lb. on cost of the lb. of tea.

LABOUR.—Coolies, both Tamils and Sinhalese, have been with few exceptions sufficient for requirements. The Chetties are having rather a rough time of it, as also the Caddy men, and Planters feel that these people have a lot to do with unsettling of Ramasamy and that they induce the kanganies to ask their tundu and leave. If Government were to insist on a pretty big stamp being put on tundus, it would not only stop this much-abused system in a great measure, but it would be a very fair source of revenue, as most districts are swarming with them. Our worthy Police Magistrate continues to give satisfaction, but he is terribly overworked. The best thing for cooly, kangany and all concerned would be if we had a penal clause in our wretched Labour Ordinance, which would enable employers of labour, with debts of over R20 due the estate, to be in a position to refuse either notice or tundu while so in debt. This would at once not only raise Ramasamy from the dreadful state of doubt he is now in, but it would also be a direct blow at dishonest bolters and the rotten advance system, like a cancer gnawing out the very vitals of our planting enterprise. The Tamils have a most wholesome dread of being held in service for any specified term; so, I think, if being indebted to an estate or to his kangany *over a certain amount held him if not in service, or limited him to the boundary of the estate till debt is paid*; his condition, as also that of the planting employees, would be improved, for he would not be so fond of borrowing. Let him sever his contract of service by all means, but if indebted to the estate, or to his kangany over a certain amount, make his stepping over the boundary and finding new employment *impossible* until he has paid the utmost farthing. Other colonies have such laws for insolvent debtors (*white* men); why shouldn't we for coolies. If we had, our P.M. would have no work to do!

ROADS—Mostly in very bad order and showing up the MacBride system in its true light. What a grand thing for the Colony a change of blood occasionally is.

HEALTH.—There has been a good deal of sickness during the year, but the average number of patients in our hospital has not been higher than usual. I never can make out what our Gampola Local Board is doing. The streets are a disgrace.

IMPORTATION OF SEED OF SHADE TREES INTO B.C. AFRICA.

We are authorised by the Commissioner to publish the following extracts from a letter from the Director of the Royal Gardens at Kew to the Foreign Office regarding the introduction of the seeds of shade trees into the B.C.A. Protectorate from India.

"The coffee disease was introduced into Fiji through the instrumentality of tea seeds from Ceylon. Notwithstanding the splendid attempts made by Sir William MacGregor to stamp it out, it ultimately completely destroyed the coffee industry, which was the most promising planting enterprise in the colony. The Germans by some unknown means have succeeded in introducing the disease into their African territories.

"In the face of these undoubted facts it would in my opinion be the height of folly to run the smallest risk of introducing the disease into British Central Africa where its presence would be an irreparable disaster.

"Knowing the mechanical way in which such work is carried out by native officials in India, I do not think that any stipulation as to locality is of the smallest value

"Whatever was stated to the contrary, the first parcel of seed would in all probability come from a plantation reeking with disease.

"The present request is the more unnecessary as according to a coffee planter in Nyasaland who is well acquainted with coffee cultivation in Ceylon, a local African tree '*Albizza fastigiata*' is admirably adapted for a shade tree for coffee. If this is no sufficient the rain tree or '*Pithecolobium Saman*' might be tried. The seed can be obtained in abundance from Jamaica and that would be perfectly safe.

"In view of the opinion of so high an authority as to the danger of introducing shade-tree seed from India H.M. Commissioner cannot consent to any infringement of the provisions of Clause I. of the Queen's Regulations for the prevention of Coffee disease in British Central Africa."—"B.C.A. Gazette," Nov. 7.

B. C. AFRICA: CURRENT CHAT.

A sale of 633 acres took place at Cholo a short time ago. The land is on or near to the Mowazi.

135 bags of Nyasaland coffee were sold in the last week of July at prices ranging from 58s. to 94s. 6d. The tone of the market at last advises was firmer.

We are glad to hear that H. M. Commissioner has refused to allow any recruiting of labour for export from B.C.A. to take place. Captain Sewell leaves immediately, his errand having been so far fruitless. We hope he will meet with more success in districts where there is not the same need to conserve labour as here.

Mr. Selby of the A. T. T. Co., who was up in Central Angoniland recruiting labour, has returned to Blantyre. He was successful in obtaining some 300 labourers who are being sent on by the Administration.

Our veteran pioneer, Mr. J. W. Moir, who has just returned from furlough, has been spending a few days at Blantyre before going on to his estate at Mlanje.

The rains which fell at Blantyre on the 29th and 30th October have been of great benefit to the plantations there and a good spike has been brought out. They seem to have been very local however, as only slight showers are reported from Zomba and some parts of Cholo.—*Central African Times*, Oct. 1897.

PRICES OF COFFEE.

The New York *Journal of Commerce* says:—"Prices of Brazil coffees are now ruling at about the lowest figures in the history of the trade. In December, 1882, February delivery sold at 5·24c. Since that date until the current year the range has been between 6⅞c. and 19c. During this year, however, there has been a gradual decline, and on the 9th instant November was quoted on the exchange at 4·45@4·60c. W. H. Crossman & Brother, large receivers, and authorities on coffee matters, say:—'The decline is the result of a coffee production greater than the consumption. The quality of this crop in both Rio and Santos is the best that we have seen for twelve or fourteen years. The average is better than any crops, except the large ones of 1881-82 and 1882-83. It is proof positive that it is the product of young tree and not old trees. The quality of the old trees was so poor that during the year of 1893, 1894, 1895 and 1896 any coffee grading better than No. 7 commanded a heavy premium and resulted in the high differences made on the Coffee Exchange last year. The quality of this crop was certainly not expected by anybody. On the basis of the receipts up to date nobody can figure less than 5,250,000 to 5,500,000 bags Santos and 4,000,000 to 4,250,000 bags Rio. From two parties in Santos estimates have been received that the growing Santos crop is as large as 6,000,000 bags. In one case it was estimated that, including the new-crop coffee, which comes in during May and June, the receipts for the twelve months could not be figured at less than 6,000,000 bags. And while this is a very high figure, actual receipts so far argue strongly in its favor. The coming crop has been estimated as high as 6,500,000 bags for Santos and 4,000,000 bags for Rio. And for the present crop, as there are new trees and a large number that will bear fruit for the first time next year, it does not seem so unreasonable. It will certainly, I should say insure low prices for a long time to come.'"

CEYLON TEA IN AMERICA.

Our Tea Commissioner sends the Committee of Thirty a full and cheering budget of news which will be found given in our Correspondence column elsewhere. Mr. Mackenzie deals largely with the progress made in the Canadian Dominion and especially in Lower Canada through the enterprise of Messrs. Larkin & Co. in conjunction with Messrs. Tetley & Co.—both, we take it, receiving a subsidy from our Tea Fund in support of their work. But we are also told of progress in Boston, New York and Philadelphia, as well as in more inland towns—Cleveland and Buffaloe—and still more in some of the Far West States. So the good work of accustoming our American cousins to really good tea, goes on, and by-and-bye, Ceylon and Indian planters ought to reap the fruit by finding the consumtion of machine-made teas across the Atlantic, double every year for some time. Mr. Mackenzie is very clear as to the advantage of the new Customs system—a number 26 sieve being substituted for a 16 sieve—and he gives Mr. Blechynden the fullest credit for the good work he performed in urging the Government until the amendment was granted. The result is that instead of pure Ceylon and Indian teas, inferior Japan and China teas are now being shut out in large quantities both from the States and Canada. These, the importers now propose, to ship to the London market—that refuge for the destitute and worthless. We have already mentioned how teas rejected at Melbourne as "unfit for human food" got reshipped to London where they sold to more than cover expenses. We trust the Ceylon-London Association may stir up the London Customs authorities to try and put a stop to this state of things, and a very good opportunity is presented now for catching, rejecting and destroying the inferior China's and Japan's about to be reshipped from America.

CEYLON TEA: WHOLESALE AND RETAIL.

Writing from the North of Scotland, Mr. A. H. Duncan raises a point that may be worth considering about our teas:—"I don't understand why your tea has gone down in price compared with that of India. There is no difference in the retail shops—Ceylon being still foremost—and the R12,000,000 which you speak of as being lost to Ceylon, must be going into the pockets of the men of Mincing Lane or the shopkeepers. I am paying the same price for the same quality of tea as I have done for the past three or four years, so the loss to Ceylon is not benefitting the tea drinkers of Britan." We suppose the explanation is that our better high-grown teas have not fallen so much in price—but that our average has fallen chiefly through the effect of medium and low-grown teas being so largely produced.

RAGALLA TEA ESTATES, LIMITED.

Report of the Directors to be submitted to the Shareholders at the Ordinary General meeting, to be held at 89, Lime Street, E.C., on Tuesday, 4th January, 1898, at 3 p.m.

The Directors beg to submit their Report, and also Statement of Accounts duly audited, for the season ending 30th June last:—

Showing a nett Profit for the Season of..	£1495	6	5
And the balance of last Account ..	795	5	2
The Total is ..	£2290	11	7

Out of which the following Dividends have been paid:—

1st January—Ordinary Shares..	£620 0 0					
,, Preference Shares	609 16 6					
1st July—Preference Shares	1050 0 0	2279	16	6		
Leaving a Balance to carry forward of		£10	15	1		

During the year the crops realized in London were:—

Ragalla and Halgran Oya Estates, Tea, 205,858lb. at a gross average 9·14d. per lb.

Kelburne Estate, Tea, 101,734lb. at a gross average of 8·11d. per lb.

Ragalla and Halgran Oya Estates, Coffee, 341.0.9 cwt. at a gross average of 88s. 8d. per cwt.

Kelburne Estate, Coffee, 297.1.22 cwt. at a gross average of 98s. 6¼d. per cwt.

The following are the acreages of the Company's Estates:—

	Ragalla.	Halgran Oya.	Kelburne.	Total.
	Acres.	Acres.	Acres.	Acres.
Tea in bearing ..	615	11	463	1289
,, non-bearing ..	111	—	309	420
Coffee ..	—	—	10	10
Timber ..	150	15	135	300
Patna, &c. ..	123	166	64	353
Totals ..	999	392	981	2372

The estimates for the Estates for the current season are as follows:—

	£
Tea Crop.—490,000 lb. at 8d per lb. nett ..	16,331
Coffee Crop.—100 cwt. at 90s per cwt. nett..	450
	£16,783
Profits on Bazaars and Manufacture ..	380
	£17,163
Less Expenditure in Ceylon for upkeep; R169,564, at Exchange 1s 3½d ..	£10,951
Gross Profit ..	£6,212

During the past year a considerable amount has been spent on Capital Expenditure, which included the erection of the new and substantial Factory on Ragalla Estate, upon which was spent, to 30th June last, £5,376. The building was opened in June for the manufacture of the present season's crop, and has fully realized expectations.

The teas from Ragalla Estate are improved in manufacture and quality, and have in consequence sold at considerably enhanced prices, the average to date for the present season being for 48,210 lb., 1/-per lb. nett, against an average for last season of 8d per lb. nett.

The crop for the present season, from Kelburne Estate, has averaged 7¾d. nett for 20,020 lb., against 7d per lb. nett for last season. The earnings of the Company, in common with other undertakings of this kind, have been reduced by the unexpected advance in Exchange, the heavy loss caused by the dearness of rice owing to the famine in India, and also labour difficulties; but the Directors are glad to say that these latter drawbacks are now to some extent disappearing, but the question of Exchange is one upon which it is difficult to form a reliable opinion.

In addition to these adverse circumstances the crops, owing to unfavourable weather during the last two months of the season, resulted in a large deficiency as compared with the estimates.

The Directors, therefore, regret that they are unable to declare a Dividend on the Ordinary Shares.

There can be no doubt that the Company possesses a most valuable property, and the Directors do not hesitate to express their opinion that as far as they can foresee it cannot fail to be highly remunerative in the near future, as the benefit from Capital Expenditure which has been incurred for some years past in opening new land and in erecting the factory will show itself by increased crops and improved quality.

The crop for the past six months has sold considerably in excess of estimates, and prospects generally are more favourable for the ensuing year.

The Directors wish to express their satisfaction with the work done by the Staff in Ceylon,

Under Clause 97 of the Articles, Mr. C. Hannen retires from the Board, but being eligible offers himself for re-election.

The appointment of Auditors also rests with the Shareholders under the Articles of Association, and Messrs. Fuller & Wise, the present Auditors, offer themselves for re-election. C. STRACHAN,
24th December, 1897. Chairman.

BOUND FOR TRAVANCORE.

Mr. and Mrs, Donald Reid, of Western Dolosbage, leave before the end of the month to take up their residence in Travancore. Mr. Reid has been appointed to the management of the Hereford plantation, Shencotta, Travancore, belonging to the Messrs. Miller, which has very fine tea and large reserves. Mr. Reid—who is an experienced and much-esteemed Ceylon planter dating from the coffee days—will have a better climate in his new charge; but the country is primitive still in regard to roads. However, there is "a good time coming" for Southern Travancore; for when the long-expected Railway is made, it will pass close to Hereford estate. We congratulate Messrs Miller in getting so good and valuable a manager, and we trust Mr. and Mrs. Reid will prosper in their new home.

THE GAME PROTECTION SOCIETY OF CEYLON.

REPORT OF THE HON. SECRETARY.

PAST HISTORY.

The question of Game Protection in Ceylon has received considerable attention from prominent sportsmen and officers serving under Government for many years, and in 1888 a Committe, consisting of General Lennox and Messrs. Downall, F. C. Fisher, R. W. Ievers, and C. LeMesurier, was appointed by the then Governor to consider and report upon the existing laws relating to the protection of game. It was recognized then that game was decreasing rapidly and that the laws were inoperative. Remedies were suggested, and amongst these an annual license on guns was recommended and a duty on guns locally manufactured.

Elephants and buffaloes received due attention, and it was proposed to raise the cost of licenses to kill or capture these animals, and a heavy export duty on hides and horns of dear and buffaloes was recommended. As a result of the deliberations of this Committee, Ordinances 10 and 11 of 1891 were passed by the Legislative Council, and, with the Ordinance No. 6 of 1893 and the Proclamation of 1894 prohibiting the export of hides of sambhur and spotted deer, were brought up to the Game Laws as they exist at the present time.

That these are somewhat defective and lamentably inoperative will, I think, be admitted by Government itself, and it is for the Game Protection Society to devise and propose some scheme whereby the condition of the wild beasts of the Ceylon forests may be ameliorated.

MR. T. FARR'S VIEWS.

To me it seems clear that until the active co-operation of the officers of the Forest and Survey Departments is secured, with the sanction and support of Government, the Game Laws will never serve the purpose for which they were framed.

A legislative enactment, such as the Madras Forest Act, combined with an Act giving special powers to officers of the Crown, would, I am convinced, do much good and would be an immense boon to the Game Protection Society in the prosecution of its work.

I would urge in addition that the revenue derived by Government from the sale of game licenses and from fines inflicted on offenders against the Game Laws be either placed at the disposal of the Society or expended by Government in the protection of game.

My object in this paper is to furnish to members as full a report as space will permit of the work of the Society since its initiation in 1894; and upon perusal of the following pages it will, I hope, be admitted that we have not been idle.

WORK DONE.

Although no drastic measures have marked its progress nor radical changes in the Legislature borne witness to its power a beginning has been made which, with better and wider representation, will develop into a sound and powerful organization.

There are many difficulties to contend with in undertaking the protection of game in a country so varied in its natural features, where its forests extend for miles and miles beyond the every-day influence of the European, and where the unscrupulous native or Moorish trader can carry on his nefarious trade at the cost of thousands of lives undetected and unchecked. There are, too, when endeavouring to check the wanton destruction of the wild beasts of the forests, the interests of the different classes to be considered. The *bona fide* villager should be given a free hand in the matter of his food supply, and the cultivator should have no restrictions placed upon the due protection of his crops; but the law should be made far reaching in its scope and relentless in its administration when dealing with those who, for purposes of trade kill down hordes of deer which the most rabid of non-protectionists can never assert those created for that end.

MEETINGS HELD.

The following reports of meetings held and resolutions passed will speak for itself, and if Government has been inclined to turn a deaf are to our recommendations and to leave us severely alone, we have not failed to endeavour to make ourselves heard.

On the 23rd May 1894, a meeting was held at the Bristol Hotel, Colombo, at which the following gentlemen were present:—

H E Rear-Admiral W R Kennedy (*presiding*).

Captain Lyon, A.D.C.	Milo MacMahon, Esq.
Colin Murray, Esq.	H Glyn Eccles, Esq.
E Gordon Reeves, Esq.	T Y Wright, Esq.
A P Green, Esq.	Edmd Jeffries, Esq.
F H C Webster, Esq.	Hawtrey T Thwaites, Esq.
E H L Thomas, Esq.	W Waddon Martyn, Esq.
R V Webster, Esq.	Gerald Browne, Esq.
A H Thomas Esq.	E Rosling, Esq.
Richard Jackson, Esq.	Commander Fisher, R.N.
W Drummond Deane, Esq.	Lieut. Hickley, R.N.
R W Ievers, Esq., C.C.S.	Lieut. Hume, R.N.
Alex. Murray, Esq.	Lt-Col. Corse-Scott, R W
J E A Dick-Lauder, Esq.	Regiment.

The following resolutions were proposed and carried:—

1 That this Society be called the Game Protection Society of Ceylon.

2 That H. E. Admiral Kennedy be Honorary President and R. W. Ievers, Esq., C.C.S., President of the Society, and that E. Gordon Reeves, Esq., be Honorary Secretary.

3. That H.E. the GOVERNOR be asked to prohibit the export of Hides and Horns of spotted deer and Sambhur for at least 3 years, provided only that Government reserves to itself the right

of purchasing at the various Kachcheries (after due inquiry as to the *bona fides* of the vendors) horns and hides that are the property of genuine villagers. Also that some regulations as to the local tanning of hides be adopted by fee, licenses or other control The outcome of this meeting was the prohibition of the export of hides of sambhur and spotted deer for a period of 5 years as, from January 1st, 1895, by proclamation on Oct. 23rd H.E. Sir Arthur Havelock, K.C.M.G., Governor of Ceylon.

A second meeting was held in Colombo on August 14th, 1894, at which the following gentlemen were present:—

R W Ievers, Esq. (*president*)	C H Bagot, Esq.
	H Wace, Esq.
T Farr, Esq.	W Saunders, Esq.
H V Masefield, Esq.	E L Thomas, Esq.
Edmd Jeffries, Esq.	J S M Ross, Esq.
Geo Beck. Esq.	A T Cathcart, Esq.
W Murray,-Menzies Esq.	Fred Hadden, Esq.
N Rowsell, Esq.	A H Pain, Esq.
H P Gallwey, Esq.	Allanson, Bailey, Esq.
F C Fisher, Esq.	A M White, Esq.
H Gordon, Esq.	H W Kennedy, Esq.
A Jackson, Esq.	G W Templer, Esq.
A Thomas, Esq.	J V Owen, Esq.
A M Hurst, Esq.	E Rosling, Esq.
A S Broun, Esq.	H E Power, Esq.
R Jackson, Esq.	H Paterson. Esq.
Ælian A King, Esq.	G A Craib, Esq.
A Tatham, Esq.	C M McCausland, Esq.
B Ffanshaw, Esq.	E Turner, Esq.
F H Price, Esq.	F J Hadden, Esq.
H M Philby, Esq.	E G Reeves, *Hon. Secy.*

The following resolutions were proposed and carried:—

I. That a Committee be formed composed of all Government Agents and their assistants and all Conservators of Forests and their assistants and the following gentlemen, with power to add to their number:— H Pain.

Geo. Beck, Esq.	Major As, Esq.
H Gordon, Esq.	E Jeffrieby, Esq.
A Jackson, Esq.	H M Philden, Esq.
R Jackson, Esq.	F J Hadnts, Esq.
A T Cathcart, Esq.	F L Clemeas, Esq.
A M Hurst, Esq.	M H Thomas, Esq.
C H Bagot, Esq.	A H Thomey, Esq.
T Farr, Esq.	H P GallwSmith, Esq
E G Reeves, Esq.	W Bowden Smith, Esq

To the above Committee the names of J. R. Barkley, Esq., and W. Hermon, were subsequently added.

II. That five shall form a quorum.

III. That the annual subscription be R5 for the current year.

IV. That the formulation of rules be left to the Committee.

As a result of this meeting the following rules were drawn out by the following members of Committee on August 17th, 1894.

R W Ievers, Esq.,	H P Gallwey, Esq.
Geo. Beck, Esq.	W Bowden Smith, Esq.
G M Fowler, Esq.	Major A H Pain
E Jeffries, Esq.	Frank Hadden, Esq.
A F Broun, Esq., C. G. Forest Department	A M Hurst, Esq.
	H Gordon, Esq.
A Tatham, Esq., C. G. Forest Department	T Farr, Esq., *Acting Hon. Secretary*
A H Thomas, Esq.	

Rules of the Game Protection Society of Ceylon:—

1 It shall be the duty of every member of the Society to make himself acquainted with the provisions of the existing Game Ordinances and to see that these provisions are carried out within his District.

2 It shall be the duty of every member of the Society to lay information as to a breach of the Game Ordinances before a Police Court, and members may exercise their discretion as to whether they shall proceed directly against offenders or after reference to the Hon. Secretary.

3. In the event of an informant in a successful prosecution being a member of the Society, the reward received by him shall be paid into the Society's funds.

4. The Society shall receive through the Secretary applications from members for the appointment of paid watchers, these applications to be dealt with by Messrs. G. Beck and T. Farr in conjunction with the Secretary.

5. It shall be the duty of every member of the Committee to obtain for the Society as many members as possible.

6. Annual General Meeting shall be held on the dates of the Colombo and Nuwara Eliya Race Meetings at Colombo and Nuwara Eliya and an Extraordinary General Meeting shall be held in Kandy or elsewhere whenever called by the Secretary.

It was resolved at this meeting that copies of the Game Ordinances (interleaved) be supplied to each member of Committee for their information.

On the 2nd December, 1895, a Special General Meeting was called by the Hon. Secretary at Hatton, at which the following gentlemen were present:—

F L Clements, Esq. (presiding)	J Manley Power, Esq.
H Gordon Cuff, Esq.	W Maitland, Esq.
Capt. Justice	C Stafford Northcote, Esq.
J G Riadore, Esq.	H Blacklaw, Esq.
R Sidgwick, Esq.	D Renny.
W A Wilson, Esq.	E G Reeves, Esq. Hon. Secretary.
T Farr, Esq.	
K H Plumridge, Esq.	

The following resolutions were proposed and carried:—

1. That Government be asked by the Society to allow a sub-Committee of sportsmen to make a draft of an Ordinance to revise the existing Game Ordinances in order to ensure the more efficient protection of game.

II. That Government be asked to provide a certain sum from the revenue collected from gun licenses for the payment of watchers for the protection of game, the Society finding an equal amount for the same purpose.

III. That the annual subscription due for 1895 be collected, and that the Hon. Secretary be asked to invite a certain number of members in each District to collect.

The Hon. Secretary, Mr. E. GORDON REEVES, resigned and Mr. T. FARR was elected in his place.

Subsequent to the above meetings the Hon. Secretary approached Government on the subject of the 1st and 2nd resolutions, and was informed that Government was not prepared to legislate further in this direction, and that the funds asked for could not be granted, as "it would be irregular to place public money at the disposal of a private Association in no way under Government control."

On February 18th, 1896, a General Meeting was held at the Hill Club, Nuwara Eliya, at which the following gentlemen were present:—

F. L. Clements, Esq. (*presiding*)	K. Macandrew, Esq
Hon. W. Paulett	A. C. W. Clarke, Esq
C. H. Bagot, Esq.	S. P. Gallwey, Esq
A. W. Jackson, Esq.	F. J. Hadden, Esq
R. Jackson, Esq.	H. M. Philby, Esq
A. M. Walker, Esq.	W. L. Murray-Menzies, Esq.
W. Hermon, Esq.	
H. V. Bagot, Esq.	T. Farr, Esq.—*Hon. Secretary.*

The following resolutions were proposed and carried:—

I. That the Honorary Secretary be requested to summarize the various suggestions made by members of the Society for the better protection of game in Ceylon and to forward the same to Government.

II. That copies of the Game Ordinances be purchased at the expense of the Society and distributed amongst the members.

III. That the Society regrets the indiscriminate manner in which licenses to kill game are issued to visitors to the island, affording privileges to them which far exceed those to local sportsmen.

This last resolution was proposed by a member who had been refused licenses to kill in a certain District more than one buffalo, when certain "titled" visitors had been granted licenses to kill three or more in the same District.

During this year the Honorary Secretary obtained from the Government Printer as many copies of the Game Ordinances printed in Tamil and Sinhalese as were available. These copies were distributed to members and were also sent to kanganies and coolies of certain estates where illegal destruction of game was being carried on

On August 12th, 1896, a General-Meeting was held in Colombo at which the following gentlemen were present:—

R W Ievers, Esq., c.c.s.

(*President*)	J. Wickwar, Esq.
F. C. Fisher, Esq., c.c.s.	C. H. Bagot, Esq.
Lieut. A. C. Pitman, R.A.	H. O. Hoseason, Esq.
A. M. Hurst, Esq.	F. G A. Lane, Esq.
W. S. R. Cox, Esq.	H. Wace, Esq., c.c.s.
F. J. Saville, Esq.	W. D. Bosanquet, Esq.
W.L. Murray-Menzies, Esq.	H. J Vollar, Esq.
Geo. Deane, Esq.	A. H. Thomas, Esq.,
H. Whitham, Esq.	T. Farr, Esq., Hon. Sec.

At this meeting the Honorary Secretary read his summary of numerous suggestions made by experienced sportsmen with regard to the better protection of game in Ceylon, which was as follows:—

Summary of suggestions received from a large number of sportsmen in Ceylon having in view the better protection of game in the Island.

Ordinance 10 of 1891, Sec. 3.—Game should include Paddy Field Deer (*Axis Porcinus.*)

Sec. 5 Sub. Sec. 2.—License to capture Tusker should be R250 or R300.

If it is considered by Government that elephants require further protection, shooting at cow elephants should be forbidden.

Sec. 5 Sub. Sec. 5.—License to kill or capture game should be raised to R10 for each Province or R20 for the whole Island.

More stringent conditions and limits must be written on the backs of licenses by the Government Agents when issuing them.

Close Season.—That a fixed period for the whole Island is inadvisable. That each Government Agent should ascertain from thoroughly experienced sportsmen in his Province or District the right and proper season that should be declared "closed," and should issue licenses accordingly. That gang hunting with beaters, dogs, and guns should be absolutely forbidden. Pitfalls, deadfall traps, large snares, spring guns and shooting game from machans should be made illegal. That sanctuaries should be declared by fixing limited areas of forest, from entering which all persons should be debarred.

That any person possessing fresh meat or raw hides or horns should be liable to account for

the same at any time, and that the Police or any Public Officer should have power to search for the same.

That the export of deer and sambhur horns should be prohibited for 5 years at least.

That guns should be licensed annually throughout the Island, the license to be obtainable at the local Post Office, and that in villages all guns should be handed in to the Kachcheri at the beginning of close season and restored at its termination to their respective owners.

That all Public Officers and a limited number of Members of Committee of the Game Protection Society should be empowered to demand the production of his license from any person carrying a gun, and to seize the latter and send it to the nearest Police Magistrate on no license being produced.

Ordinance No. 10, 1891 Sec. 11 (*d*)—That a minimum penalty of R10 be imposed for every breach of this clause. After the words "capture game" should be inserted the words "or aid and abet in the same."

The Conservators and Assistant Conservators of forests should be empowered to investigate all cases where any infringement of Ordinances Nos. 10 and 11, 1891, and No. 6, 1893, has occurred, and to administer the law as laid down by those Ordinances.

That licenses to Immigrant labourers on estates should only be granted at the written request of the Superintendents of such estates. That the possession of live sambhur or deer should be an offence punishable by the law, as it is reported that a large trade is done in this manner.

Complaints against the visitations of the Globe Trotter are frequent and emphatic, and the general opinion amongst members of this Society is that the present facilities for sport afforded to visitors to the Island should be discouraged by considerably increasing the cost of a license to such strangers, and that local sportsmen should not be unfairly restricted in the matter of obtaining licenses.

A copy of the above suggestions was placed in the hands of H.E. the Governor who gave them his careful attention.

At this same meeting it was resolved that a Sub-Committee consisting of Messrs. R. W. Ievers, F. C. Fisher, C. H. Bagot and T. Farr should be authorized to expend immediately a sum of R500 on the importation of game, and on the 14th August, 1896 the Sub-Committee met to discuss the expenditure of this sum.

It was resolved that the following game birds be imported at an early date:—Black Francolin, Chukhor, and Hungarian Partridges.

The Hon. Secretary was requested to make enquiries regarding the importation of the Indian Antelope (Black Buck) and Cervus Hippelephus (Mauritius Deer).

On March 1st, 1897, a General meeting was held at the Hill Club, Nuwara Eliya, at which the following gentlemen were present:—

Allanson Bailey, Esq., c.c.s. (*Presiding*).

Captain Marker, A.-D.-C.	F G A Lane, Esq.
E Boyd Moss, Esq., C G Forests	C H Bagot, Esq.
W Ferguson, Esq.,	Alderson Smith, Esq.
North C Davidson, Esq.,	E Marker, Esq.
A E Wright, Esq.,	T C Huxley, Esq.
J Fraser, Esq.,	J Quayle, Esq.
R Jackson, Esq.,	J Wickwar, Esq.
	T Farr, Esq.—Hon. Sec.

The following resolutions were proposed and carried :—

I. That Captain Ward Jackson, A.D.C., be warmly thanked for his liberality in presenting the Society with 21 chukhor, which birds he imported from N. India.

II. That it be suggested to Government that the export of deer and sambhur horns be prohibited, and that the prohibition of the export of the hides of these animals be continued indefinitely.

III. That the Game Protection Society, in reply to a minute from the Hon. the Colonial Secretary, sees no objection to the proposed Buffalo Kraal on the Ragalla Patanas, provided that no buffalo be shot in the Kraal unless absolutely necessary.

IV. That the Honorary Secretary be authorized to expend a further sum of R500 in importing chukhor, and to make enquiries the cost of importing other game birds.

V. That the Secretary be empowered to have printed and circulated, forms inviting membership.

A copy of the above resolutions was forwarded to the Hon. the Colonial Secretary, and on the 27th March, 1897, the following letter was received by the Honorary Secretary :—

Colonial Secretary's Office,
Colombo, March 26th, 1897.

Sir,—I am directed to acknowledge the receipt of your letter of March 12th forwarding for perusal copies of the resolutions passed by the Game Protection Society.—I am, sir your obedient servant,

J. J. Thorburn, for Colonial Secretary,

To T. Farr, Esq., Hon. Secretary, Game Protection Society.

ACCLIMATIZATION OF GAME.

From the minutes of the two last meetings it will be seen that the importation and acclimatization of game was first undertaken in 1826 under the auspices of the Game Protection Society, and late in the same year Hungarian and French partridges, 10 brace of each, were indented for by Mr. C. H. Bagot from Messrs. John Bailey & Co., London.

This experiment was attended with most disappointing results, and only twos Hungarian and two French partridges survived the long sea journey and reached Mr. Bagot alive.

These were turned down on the patanas adjoining St. Leonards' Estate in Udapussellawa, and represented an expenditure of £20.

Early in 1897 the Honorary Secretary received, through the kindness of Capt. R. Ward-Jackson, eighteen chukhor out of twenty-one birds that were despatched from Northern India.

They arrived in very poor condition, and three of them were evidently in a dying state on arrival. These were carefully nursed and attended to, but with no success.

The remaining 15 birds were confined in a warm and dry room with a "run" attached. With the exception of three sickly birds they appeared to thrive remarkably well on paddy and green food. Sods of turf were placed in the run twice a day and were soon made bare of vegetation by the birds who pecked at the blades of grass greedily. When considered sufficiently strong to feed for themselves, the surviving twelve birds were turned down on the Horton Plains in a sheltered and carefully chosen piece of jungle. They were fed three times a week for a short period, and water was supplied to them in small tins placed just on the edge of the forest. They had easy access to a stream of water some 50 yards from where they were turned down.

With the exception of a very small sum expended locally these chukhor cost the Society nothing.

THE RESULTS SO FAR..

The initiation and history of the Ceylon Game Protection Society having been given in the foregoing pages, a summary of the good done and points gained by it during the past three years may prove of interest to its members, and in order to set this forth clearly I must deal with each animal separately and summarize the reports of various sportsmen whose opportunities of forming a reliable opinion entitle them to respect and consideration.

Elephants.—These animals appear to have been on the increase of late years, and it is an undoubted fact that the enhanced license fee has checked their destruction in a most marked degree. It behoves the Society now to see that they are not destroyed for the purposes of trade by persons who may have discovered that their hides are of sufficient value to render the license fee of R100 a matter of no consideration.

Buffaloes.—Reports reach me that a large and lucrative trade is carried on in dried meat and in hides, and that large numbers of buffaloes are killed by "Moormen" traders for these purposes.

Sambhur.—From my own observations in the Hills I am satisfied that there has been no decrease of late years ; indeed, I am in a position to state that where legitimate hunting only has been the means employed to kill them they have increased in numbers.

Tracts of country too much overrun by estate coolies with guns and dogs or beaters have been almost denuded of game. Large numbers have been killed and still more have been driven to the quieter sanctuaries remote from cultivated land.

The more stringent conditions attached to licenses by the various Government Agents have proved beneficial, and during the past year many Tamil coolies were refused licenses altogether where they had in preceding seasons offended against the spirit of the game laws.

These measures have proved salutary, but I venture to question the propriety of issuing any licenses to kill deer to immigrant labourers on estates. In a force of, say, 200, to 1,000 coolies application will be made for 2 or 3 licenses at the most, but, protected by these, gangs of twenty and thirty go out into the forests and patanas and compass, jointly and severally, the destruction of many deer.

In the Plains I am told that sambhur are on the decrease, and that mature animals are seldom seen.

Spotted Deer or Chital (Axis Maculata).—There is a general consensus of opinion that these beautiful animals are decreasing in numbers to an alarming extent. They are destroyed in the remoter districts of the Island in a variety of ways, even to the extent of herding them together during the dry season near water-holes and pools in dried up river beds and killing them with clubs.

Their hides are, I believe, the most valuable of all hides on the markets of Europe, and their horns as well as those of sambhur are exported in immense numbers.

Red Deer (or Muntjac).—It is impossible to state with any degree of accuracy whether this timid little animal has benefitted by protection. That they are very plentiful in the habitats they most frequent is, I hear, an assured fact. They are

not slaughtered for their horns or for their hides, and as they breed and multiply more rapidly than their larger brethren, there can be no danger of their extinction or even decrease.

PADDY FIELD DEER (OR AXIS PORCINUS).—This handsome little beast inhabiting the jungles, mainly of the Southern and Western Provinces, has been inadvertently omitted from the list of protected game. He is by no means common, and being by nature more or less a day-feeder should receive the attention of all sportsmen in whose vicinity he may be found who should endeavour to extend to him the protection he merits and needs. For the information of those who may not have come across this deer I describe him as a miniature sambhur.

PEAFOWL.—These birds are, I understand, becoming more and more scarce, as they are shot by native traders for their handsome plumage, and I fear their "closed" season is but lightly regarded by these poaching scoundrels.

MOUSE DEER AND HARES.—The ægis of protection is not extended to these animals which are very plentiful on the hills and plains alike, but sportsmen should endeavour to stop in their neighbourhood that pernicious habit of the Tamil cooly of setting dead-fall traps in the jungle and nets in the open patanas and scrub by which means large numbers are killed, whilst many a good hound and favourite dog has fallen a victim to the former.

HORNS AND HIDES.—The Proclamation of October 23rd, 1894, prohibiting the export of sambhur and deer hides compelled the traders in those commodities to seek fresh means of disposing of them, and a large local industry in converting them into leather is carried on in Colombo, as is evidenced by the large number of tanneries now in existence. Hides are also being stored in large quantities in anticipation of the expiry of the term during which the prohibition of the export is to be in force. The Proclamation should therefore be indefinitely prolonged.

I am of opinion that deer and sambhur hides are smuggled out of the Island in considerable quantities, concealed in cattle and buffalo hides as well as in native boats from South and East Coast Ports. A case of the former method was detected at the Custom House in Colombo some months ago, and the only punishment was, according to the newspapers, the confiscation of the hides.

With regard to horns of deer and sambhur, these are exported in sufficiently large quantities to prove that the export is not confined to shed horns It is wellknown to all sportsmen who have studied the habits of deer that they eat the shed horns of their species very quickly, and unless the collector of horns goes his rounds very frequently he would find very little left for him to carry home. Within a few days all but the very base of the horn would be gnawed away and consumed.

Government is, I believe, to a certain extent in sympathy with the Society and would, I believe, gladly take measures to check the trade in horns could it be proved to their satisfaction that the bulk exported are not shed horns.

Horns stored for export in Colombo have been inspected and examined by members of the Society, and what would seem so easy to prove is by no means so. The itinerant Mahomedan traders who collect them have evidently some method of detaching them from the bone, so that the horn has all the appearance of a shed horn, except that the corrugations on the base of the horn are rougher and fresher looking than they would be if shed in the course of nature.

On November 16th, 1897, the Honorary Secretary paid a surprise visit to one of the shops in the Pettah of Colombo where horns of deer are stored for export, and having discovered a large heap of deer and sambhur horns, took the opportunity of examining them closely with the object of ascertaining the proportion of shed horns amongst them. At a rough calculation not more than five per cent. were "shed" horns, the rest had bone attached and were undoubtedly those of killed animals. The Honorary Secretary was informed that the market value in London for spotted deer horns was R2 per lb., and that of sambhur horns 62 cents per lb. A pair of deer horns was then purchased for R5

It is believed by many members of the Society that the export of deer horns is not confined to the Port of Colombo, but that a large illicit export is carried on from the Southern and Eastern coasts. With this in view, the Hon Secretary on November 1st, wrote to the Hon. L. F. Lee, Principal Collector of Customs, asking for a statement of the export of deer and sambhur horns during the years 1896 and 1897 from Colombo *and other ports*, and the following reply was courteously and promptly returned :—

No. 1,113. H. M. Customs,

Colombo, 3rd Nov. 1897.

SIR,—I have the honour to enclose a statement giving the information asked for in your letter of the 1st instant.

No horns were shipped from other ports in the Island during the period mentioned.

I am, &c.,
L. F. LEE,
Principal Collector.

THE EXPORT OF DEER AND SAMBHUR HORNS SINCE 1892 TO THE PRESENT DATE IS GIVEN BELOW IN HUNDREDWEIGHTS.

	1892	1893	1894	1895	1896	*1897
Deer ..	—	—	—	—	548	512
Sambhur ..	—	—	—	—	605	295
Total ..	1313	1643	1760	1439	1153	807

* For the first 10 months.

The above figures represent a ghastly record of slaughter.

It has been stated by the Custom House authorities that the average number of Sambhur horns to a cwt. is 114, and of deer 130. This evidently refers to the single horn and not the pair, for they are all cut or sawn in two for shipment.

If members of the Society will now reckon up the value to the trading native gunner of a spotted deer, of its flesh, its horns and its hide he will find that the temptation to make a trade in their carcases is very great. It should be borne in mind also that more hinds than stags are killed by natives.

I am unable in this report to give a list of prosecutions under the Game Ordinances, but they are comparatively insignificant and will be dealt with in my next Report.

I append a statement of the Society's funds and accounts to the present date.

THOS. FARR, Hon. Secy., G.P. Society.

THE HONORARY SECRETARY IN ACCOUNT WITH THE GAME PROTECTION SOCIETY.

	R.	c.
January 10th, 1896.—To balance per E. G. Reeves, Esq.	409	11
February 24th, 1897.—To subscriptions received in 1896	500	25
Do. do in 1897..	15	31
December 30th, 1897.—To subscriptions received in 1897	645	00
	R1,569	67

	R.	c.
February, 1897.—To cheque books, Bank charges, &c.	17	75
By Stationery	34	95
" Printing ordinances.. ..	8	91
" Advertisements of meetings, &c.	21	25
" Postages	20	00
" Cheque for demand draft for £20,000 at 1/3⅝ in favour of J. Bailey & Co., for partridges ..	313	47
" Bank charges, 1897	8	50
" Advertisements of meetiugs, &c.	39	55
" Balance	1,105	29
	R1,569	67

E. & O. E.

Thos. Farr, Hon. Secy., G.P. Society.

December 30th, 1897.

To balance .. .. R1,105·29

PLANTING NOTES.

Silkworm.—Our local lovers of sericulture will be interested in the following :—" An interesting experiment is being made by the Department of Revenue and Agriculture in the importation of a quantity of China silk cocoons (antheiea pernyi). These have been procured from mountainous districts in China, and the cocoons are, therefore, being sent to Darjeeling and Chakrata."

"Passing of the Old-School Grocer."—Under this heading an article signed "S. Elwood May, successor to the Ceylon Planters' Tea Co,,' appears in the American "Merchants' Review.' At the outset the author states that in his many travels in pursuit of new clients in the interest of the Ceylon planters and their bhud, tiffin and bungaloe teas, his mind had been directed to how rapidly conditions change in that country. He states :—

Not many years ago, when I pioneered the introduction of Ceylon tea, the leading grocers of every city, large or small, were autocrats, who stoutly resisted any innovations of whatever nature, pleasantly dictated to their customers, and followed out their own ideas absolutely. This method of procedure caused me to study other lines of business, and I found that the grocer was the only old-school merchant successful at that period. Those representing other lines of trade had long ago been forced into transacting business in accordance with the advanced methods of the day. I made up my mind that the old-school type of grocer, wedded to his traditions and ruts would soon find that the prerequisites to future success would be the following out of his clients' whims instead of his own. I recently travelled some six thousand miles, and in most of the cities that I visited the passing of "ye olden school" grocer was quite visible.

After relating incidents, he concludes :—

I am one of many who wish the old-time merchants yet remaining would change before it is too late, for whatever credit may be given to the new school ones, all honor to the integrity and lofty purposes on the whole that have always existed in the class of the olden school.

The "Indian Forester," edited by J. W. Oliver, Conservator of Forests and Director of the Forest School, Dehra Dun, for December 1897, has the following contents :—Original Articles and Translations—Nitrogen and Forest Crops by E Henry, translated by G F Gleadow; Obituary—Mr. C H Hobart-Hampden; Correspondence—Extra Pensions for the Forest Department; Dry Rot in Deodar trees; Sir Richard Strachey and Indian Forestry, letter from A C Wild; The After-Training of Cooper's Hill Men, letter from "Spificator"; Official Papers and Intelligence—The Destruction of the Prickly-pear with the aid of the cochineal insect and other parasites; Ceara Rubber in a Malabar District; Extracts, Notes and Queries; Timber and Produce Trade; and Extracts from Official Gazettes.

Indian Tea Companies.—The Planters' Store and Agency Company, Ld., has issued an analysis of the working of several London Tea Companies. Three companies stand far in front of the rest in the dividends declared in 1896, namely, the Assam Co., the Brahmaputra Tea Co., and the Jorehaut Tea Co., all of which yielded dividends of 20 per cent. The Doom Dooma Tea Co., and Balijan Tea Co., come next with dividends of 12½ per cent. but as regards the profit per pound of tea, Balijan and Doom Dooma take priority with 4 9/16d and 4-3/32d. In the percentage of profits over the entire share and Debenture Capital the Assam and Brahmaputra Tea Companies take the lead 23·14 and 23·43 per cent.—*I. P. Gazette.*

Ceylon Land and Produce Company.—We omitted to mention that besides the 15 per cent of dividends for each of the past six years, the fortunate shareholders in this Company got in addition, in 1893 and each of the last three years a bonus of 5 per cent, making 20 in all. The following return issued with the annual Report of the Directors is of interest:—

THE CEYLON LAND AND PRODUCE COMPANY, LIMITED, STATISTICS FOR PAST EIGHT YEARS :—TEA :

Year ending 30th June.	Acres of tea in bearing	Crop, lb.	Average per acre, lb.	Teas made for others, and from purchased leaf, lb.	Net average per lb. realized for all tea sold in London.	Rate of Exchange.	Rupee, Cents.
1890	1,131	354,842	314	286,292	9·46d	1/5½	54·06
1891	1,245	480,684	358	357,648	9·10d	1/6	48·61
1892	1,385	503,293	364	479,005	7 81d	1/4¾	46·63
1893	1,406	589,192	419	528,172	7·70d	1/3	51·33
1894	1,451	608,110	419	342,040	6·77d	1/2½	46·08
1895	1,556	597,399	384	435,9(8	7·34d	1/1¼	55·40
1896	1,556	694,720	446	590,111	6·80d	1/2	48.37
1897	1,571	748,994	476	432,652	6·51d	1/3	43 40

COCOA : DIVIDENDS :

Year ending 30th June.	Crop, cwt.	Net Average per cwt.	Highest price realized.	Preference.	Ordinary.
1890	1,224	95/11	115/	6 per cent	10 per cent
1891	1,355	108/	129/	6 "	10 "
1892	1,431	96/5	120/	6 "	15 "
1893	1,201	90/11	150/	6 "	15 "
1894	1,212	58/4	83/	6 "	15 "
1895	2,840	52/9	65/6	6 "	15 "
1896	2,335	56 8	80/	6 "	15 "
1897	2,266	66/1	85/	6 "	15 "

OUR STAPLE EXPORTS FOR TEN YEARS —AND DISTRIBUTION FOR 1896-97.

COCONUT PRODUCTS.

The growing importance of the Coconut industry, and the extraordinary change which has taken place in recent years in the distribution of the products of the Coconut palm, require a fuller consideration of the figures contained in the table of Exports we issued as a Supplement last Saturday, than they might otherwise receive. Although, in figures, the exports of the ripe nut in the shell and of the kernel after desiccation may make a braver show, it is the Oil which, after all, is the chief product and continues to govern the price of nuts. Estates in the immediate vicinity of Desiccating Mills may calculate on the new industry, which has sprung up within the last decade and which can show figures only for seven years, as controlling the market; but it is not in reality so; although such estates may benefit by their situation in saving transport and breakages, while commanding the same price for delivery at the Mills as Estates more distantly situated. And why Oil rules the market will appear at a glance, if we consider the exports only for last year. Whereas the number of Nuts exported was 13,610,508, and was exceeded only once in 1896, when about a quarter million more nuts were sent away; and whereas the record figure for Desiccated Coconut (12,054,452 lb.) represents, at three nuts to the lb., between 36 and 37 million nuts, the export of 409,600 cwt. of Oil represents no less than 204 million nuts, at 500 nuts to the cwt. Hence the importance of developing the Oil trade, and hence the significance of our inquiry into the causes of the vast difference in price between Cochin and Ceylon Oils. The upshot of our Circular appeal has been to place beyond doubt that the main factor in the advantage which Cochin Oil has in the Market, of between 30 and 40 per cent in the price, over ours, is the careless drying of local copra, which renders the extraction of white Oil from the greater part of the supply impossible. Mill owners do utilize the kernel from the drier districts which are able to avoid fire-drying and can turn out clean copra to manufacture a proportion of colourless Oil; but clean, white copra, so far as we can see, does not command the relatively higher price it should, chiefly because of the preponderance of bad copra. The general outturn of our Oil is slightly yellow; the price quoted is for Oil of that quality; that rules the price of copra; and it is the mill-owner who chiefly benefits by the white Oil he is able to extract from the white copra that comes into his hands, and not the owner of the copra who gets little beyond the market price for ordinary copra for his produce. The remedy would seem to lie in the general improvement of the quality of our copra, which would improve the general quality of our Oil, as it would hardly pay individual proprietors to manufacture and ship only their own white Oil. Or can it be expected that some capitalist may start a Mill only for the production of white Oil by purchasing only sun-dried clean copra?

But to return to the figures—the export of Oil last year was only a fair average quantity. It was in excess of the figures for the two previous years, but it fell short of 1894 when 487.571 cwt. were exported, and far short of 1892 when the figures reached 550,977 cwt. We cannot, therefore, record a progressive development of the Oil trade; but it is important to note that the fluctuations in exports are in no way connected, as is the case with upcountry products like tea, coffee, cocoa &c., with seasons and crops. The exports of most of our staples represent practically the total production of the island for the year; the out-turn of Oil depends, not so much on the crop of nuts, as on the price of Oil and on the demand for it. Had prices been higher and the demand stronger, we take it that we should have been able to send away quite as much as in 1892, with perhaps a slight reduction in one or more of the other forms in which the products of the palm are exported. In such case, the brisker demand for Oil would have led to higher prices for copra and for nuts. And that leads us to a consideration of the distribution of Oil during the last two years in which there has been little short of a revolution. Ever since Coconut Oil formed one of our staple exports, the United Kingdom has been its largest purchaser, and the leaves from an old mercantile book of 60 years ago, which we recently published, disclosed almost the beginning of the trade; but last year the United Kingdom took only 72,004 cwt., out of the total of 409,600 we exported. That is only about one-sixth of our total exports, and nearly 20,000 cwt. less than was taken in 1896, which itself showed a considerable falling-off. Nor are there larger shipments for Continental ports to suggest the supersession of the London market by direct importations. Austria's imports of our Oil fell from 24,313 cwt. to 8,717; Belgium's from 3,314 to 1,133; Germany's from 17,141 to 5,754; Italy's from 1,317 to 310; while France and Russia which used to take a few hundred tons, have disappeared as customers! This falling-off in custom was not due to prices which, if any thing, showed a slightly downward tendency. The cause was probably cheap tallow which was reported to be very abundant in America and the United Kingdom. It would be interesting to inquire whether the quality of our Oil told against it, and whether the countries which took less from us, took more from Cochin, or found other substitutes. It is not unlikely that in some cases, and to some extent, larger importations of nuts and copra compensated for the falling-off in orders for oil. Anyway, what we wish to point out is the great shifting there has been in trade whereby India almost doubled its demands on us, and took away 166,238 cwt., against 86,796 the previous year. She is thus far and away our best customer, taking from us more than twice the quantity which the United Kingdom imported, and almost twice the quantity which America our second best customer indented for namely 88,000 cwt. Here, too, we find, if not a revolution, a considerable change, as it is comparatively recently that America began taking our Oil. She soon proved a good customer, but was long far behind, although now she is ahead of, the United Kingdom! Another place which has almost doubled its demand is Singapore which took 64,058 cwt this year against 34,133 in 1896. The great free Port of the Straits and India have thus taken from us considerably more than one-half of our total output of Oil; and if our older customers revert to their large orders, the brisker demand should lead to higher prices. But how is this to be secured? Cannot coconut growers combine to act in the way tea planters have combined, to make their teas known in new markets, and to study the requirements of the old markets?

The effort is worth making, if there could be a satisfactory organisation, because, as we have seen it is the demand for Oil that governs the price of nuts; and with large extensions and immense areas coming into bearing, the supply may possibly go ahead of the demand.

In Copra, too, the exports represent only a fair average quantity in 106,601 cwt., though that is double the quantity sent away in 1896. Germany took 42,878 of the total output and Belgium 25,245 cwt. In Desiccated Coconut, the progressive increase has continued—12 million lb. having being sent away against 10½ million in 1896; but we are not hopeful there will be much more expansion in the manufacture. Already, we learn that some of the smaller Mills have restricted their output, or ceased work for some months of the year. The article is not one that improves by keeping; and although the oldest establishments may be able, through good business connections and advance orders, to keep up their output or increase it, there is no encouragement for new factories. More than three-fourths of the exports have been to the United Kingdom. America follows with 900,917 lb. or less than one-tenth of the total quantity; Australia with 672,897 lb. and Germany with 542,965 lb. Reference to other lowcountry and native products we must reserve for another occasion.

THE CEYLON TEA CORPORATION, LIMITED.

An extraordinary general meeting of shareholders in the Tea Corporation, Limited, was held on Wednesday (Dec. 22nd) at the registered offices of the Company, No. 15, Bishopsgate-street Within, the chair being occupied by Mr. H. W. Tugwell.

The Secretary (Mr. Alfred Howell) read the notice convening the meeting.

The Chairman said: This, as you know, is only an extraordinary general meeting of the Corporation, and therefore the business we have to transact is purely formal. I will, however, give you a brief account of the Company's property, taken from the reports of our managing director in Ceylon. Mr. Tatham's reports are satisfactory. He left London for Ceylon at the end of July; but owing to delay in transferring the estates, he is just taking over the actual management of our properties. In the meantime he has been visiting all the estates and advising the managers how to proceed, and under the circumstances they are naturally ready to value his advice. In the estimates in the prospectus we put the yield of Dotaloya and Penylan at 530,000 lb. of made tea. I may remind you that these two estates produce nearly one-half of our tea. Now, our manager states that he will be rather disappointed if they do not produce 550,000 lb. during the first year of his management, and that in the third year he hopes to work the yield up to 700,000 lb., or an increase of 170,000 lb. of made tea. You must add to this the increase on the Kudaoya group which he is sure he can effect. The average net price so far obtained for our teas has been very satisfactory; but against this has to be set the advance of exchange and the high price of rice owing to the Indian famine. Our managing director, in his report on Dotaloya, says: "The factory is a fine building, and capable of making 500,000 lb. of made tea. The estate, taken acre for acre, would more than hold its own against any estate in the island. In the past it has suffered from scarcity of coolie labour, but in recent months the labour force has been increased by 481 men, with 200 more coming in." He also says he sees no reason why Dotaloya should not give 400,000 lb. in 1900, if the estate is aided with a little manure. Penylan is smaller than Dotaloya, and yet produces 250,000 lb. of made tea, which should be increased to 300,000 lb. In Penylan a gradual improvement can still be made. I think, therefore, we may congratulate ourselves on being the owners of a good and improving property, which in my judgment, should soon show very good results. (Applause.)

The Chairman then moved certain special resolutions embodying some changes in the articles of Association so as to comply with the requirements of the London Stock Exchange.

Mr. Smith seconded the resolutions, which were carried unanimously.

A desultory discussion ensued, during which Sir Charles Lawson asked how long it would be before any return of the tea would be made.

Mr. Hancock replied that for the first half-year the tea would not be sold until an interval of something like another three months had elapsed, so that it was impossible at present to answer that question.

A Shareholder asked whether it was the intention of the Board to declare an interim dividend.

The Chairman said he considered that the shareholders should give the directors a little time to see how things went.

A Shareholder said he considered that these matters might very safely be left to the discretion of the directors. (Hear, hear.) He had visited most of the estates in Ceylon belonging to the Company, and could confirm everything that the Manager had said in regard to them. The production on the estates had in the past been limited by the difficulty of obtaining a sufficiency of coolie labour; but the manager had now a force of 400 extra coolies coming on the plantations, and he had no doubt that the product in the future would be very largely increased.

Mr. Shand also spoke hopefully as to the Company's prospects, and said that if reasonable arrangements could be made in regard to freight the estates would no doubt do very well.

The Chairman, in acknowledging a vote of thanks which was unanimously passed to the board of directors, expressed a hope that at the next meeting they would be able to put the shareholders into possession of an even more favourable statement as to the Company's position.

The proceedings then terminated.—*Grocers' Journal*, Dec. 25.

PROPOSED ASIATIC COMMERCIAL MUSEUM AT SAN FRANCISCO.

The United States Consul at Bangkok proposed, in a report to his Government, the establishment of an Asiatic commercial museum at San Francisco on similar lines to those of the Philadelphia Museum, for the special purpose of bringing the immense markets of the Asian Pacific into closer touch with those of the United States, and providing manufacturers and exporters with ready and accessible means for securing all kinds of information relative to the markets of the Far East. He recommends, *inter alia*, that the exhibits should be samples which could be readily obtained and shipped to the museum at San Francisco, or, if too cumbersome, then photographs could be made, the main object being to show exactly what competition must be met in style and quality. A study of these, with information as to prices, would provide the exporter with sufficient details and enable him to determine whether he could enter the field or not. It now requiries fully three months for a manufacturer to receive a reply to enquiries sent to Asiatic ports, but through a museum of this kind the same information could be obtained in ten to twelve days, whilst exporters would reap the benefit of frequent consultation and ready access. The exhibits should consist of exports as well as imports, and all necessary information as to prices, firms, duties, etc., should be provided.—*Imperial Institute Journal.*

CEYLON LAND AND PRODUCE COMPNY, LIMITAD.

GENERAL MEETING.

The thirteenth annual general meeting of the Ceylon Land and Produce Company, Limited, was held at 101, Leadenhall Street, London, E C., on Wednesday, the 22nd December.

The chair was taken by Mr. William Keiller.

The Secretary having read the notice convening the meeting,

THE CHAIRMAN'S SPEECH.

The Chairman said: Before passing to the report I wish to remark that Mr. Wilson has expressed his regret at being unable to be present at this meeting, but he considers the company's interests will be better served by his remaining in Ceylon for a little while longer. Gentlemen,—The report of the directors for the year ending June 30, 1897, is in your hands, and I presume it may be taken as read. The statistics issued with the report, covering the crops of tea and cacao for the past eight years are so complete that I have nothing further to add in this respect. With regard to coffee, I am sorry to say that the crop was a very small one: in fact it was too small (only 264 bushels) to deal with in the same way as we have dealt with tea and cacao. I may say that the tea crop exceeded the estimates by 62,000lb., but realised in Ceylon currency about five cents per lb. less than the previous year. Cacao fell short of the estimates by 50 cwt.

NO CACAO DISEASE.

This deficiency occurred solely in the North Matale group, and was due to abnormal rains in December last which injured the blossom, and, roughly speaking, resulted in a diminution of the crop by 200 cwt. With regard to cacao disease I may give you the opinions of the superintendent and Mr. Wilson regarding our estates. The former states that a tree here and there may have died (the same as happens to coffee, tea, or any other product), but no patches have died out and that there is no more disease now than what might have been, say ten years ago. He has made a point of going carefully through all the company's clearings, but has not seen a single instance of the disease that is being written about just now. He has questioned all the superintendents, and likewise the kanganies, if they have seen any signs of it, but their verdict is in the negative. He hoped this state of affairs may long continue. He has been over estates where it does exist, but he says it is nothing so serious as he was prepared to see. Most of the company's cacao is on undulating and pretty steep ground, which is a great advantage, I understand, although it may not crop so freely as what is planted on flat land. Trees die out here and there from different causes, as they have done ever since the company's cacao was planted, but to no greater extent than previously, just as tea does, and fruit trees and bushes in England. Mr. Wilson reports he has never seen the company's cacao, with the exception of some backward patches of the new clearings, look better than at present, and I think you will agree with me that this is a very satisfactory state of affairs for this company.

VARIOUS PRODUCTS.

At the last meeting the directors were asked to obtain a census of coconuts, and I now give you the figures collated in September last: 1,343 trees in full bearing, 16,052 trees not bearing (these all promise well), 24,336 nuts in nurseries. I will now direct your attention to our new clearings. Our last reports from the Alloowiharie group state that they are doing well, and promise to be successful. As an indication of the progress being made here, I may say that during last year 8,000 lb. tea leaf were secured, whilst the estimate for the current year is 30,000 lb. leaf. We have seven acres of tea four and five years old in bearing, and in addition are now plucking from a portion of a 40-acre lot. About 20 acres have been added to this estate by purchase. The tea clearings at Andangodde are coming on very well; they consist of 6½ acres under three years old, 39¼ acres above one-year old. The 80-acres clearing on Fetteresso is making good progress—we hope to commence plucking off about 30 acres during the coming calendar year, and the balance in the financial period 1898-99. The young cacao at New Peradeniya is doing well, and at the moment there are no signs of disease whatever. The tea clearing also is progressing favourably, and in time will be a good field. During the present year the plucking area will be increased by nearly 30 acres. The coffee clearings at North Matale have not done well, I am sorry to say, the Arabian variety being almost a failure. It had a bad attack of leaf disease shortly after being planted, and since then it has not fully got over it. The young tea and cacao make good progress; sixteen acres of tea will come into bearing next financial year, and fifty-five acres of cacao in 1899-1900. The area of Owella has been increased from 261 to 372 acres (by purchase), whilst the planted area now comprises 165 acres of tea, cacao, and coconuts. On October 31st the superintendent reports that the general condition of the estate is improving, and the various products are doing well and have a healthy look. The figures given in the directors' report for 1895-96 with regard to Strathisla, were not quite accurate owing to an error on the part of the superintendent, but I think the acreage statement, which shows an increased area of about sixteen acres in the present report, is substantially correct.

TO SUM UP.

The high opinion previously formed by Mr. Wilson of this estate he still adheres to. He thinks that in course of time we shall have a very valuable asset. It now remains for me to sum up. In 1896-97 we had 1,571 acres of tea in bearing, and thus it will be seen that our total tea clearings amount to 660 acres (including coconuts on Owella), all of which will come into bearing during the next four years. The bearing area of cacao last year was 929 acres whilst since 1893-94 we have planted 445 acres, which will, we hope come gradually into bearing from 1899-1900 onwards. Now as to the prospects for the coming year. The estimates provide for 752,500 lb tea, against an intake of 749,000 lb last year, and a cacao crop of 2,500 cwt, comparing with 2,266 cwt brought into store during the past twelve months. Including tea made for others and from purchased leaf of our total estimate of tea figures out at 1,107,000. My advices from Ceylon bring estate figures down to November 15th, and at that time we were 23,000 lb tea ahead as compared with the same date last year, the increases being mainly from New Peradeniya and North Matale. Fetteresso and Rickarton crops are, so far, short, owing to the very wet weather encountered. On the whole, I think the prospects of our estimates being exceeded are encouraging. The cacao intake to 15th ult. is 575 cwt, and compares well with 141 cwt secured by November 15th, 1896, but it must be borne in mind that the crop is earlier this year than last. It is, of course, too soon to make any prophecies about the total cacao crop, but if I may hazard an opinion, I think it is likely—given normal weather—that the estimate will be secured. I now turn to the profit and loss account and balance-sheet, and with your permission will deal with the items seriatim. Upon comparing the present profit and loss account with the previous one, it will be seen that expenditure on crop account has been increased by £2,248; this is due to rise in exchange from 1s 2d to 1s 3d loss on rice, and cost of handling the increased tea crop.

THE RISE IN EXCHANGE.

The rise of a penny in exchange has cost us over the entire expenditure a little more than £1,800. Interest on debentures and loans is a decreasing quantity, the aggregate of bonds outstanding and the rate of interest payable being reduced. On the credit side it will be found that produce has realised rather more than £750, as compared with last year. Commission show a reduction from £753 to £190, whilst we have made a profit in realising the produce outstanding from the previous year of £177. Turning now to the balance sheet, it will be found that our paid up capital has been increased by £3,200, being the proceeds of a 10s. call on the ordinary shares, Debentures have been paid off to the extent of £5,140,

Deposits are much the same. Sundry creditors, consisting for the most part of advances against produce, indicates a reduction of £536. The large increase in bills payable is due to a larger expenditure and also to the fact that an acceptance for a substantial figure matured in the early days of July. On the other side of the account our estates show a book value of £103,032, or an increase of £4,095. This represents the sum spent upon purchase of land, opening, and planting, plus up-keep of our new clearings during the year. The three following items need no comment. Coast advances are an increasing item, due principally to two causes: (1) the rate of advances has a tendency to grow; (2) we need a larger number of coolies in connection with the new clearing. It will be of interest to point out that we have 1,374 acres of cacao and 2,232 acres of tea, and that, allowing £5 per acre for forest, chena, &c. (say 1,550 acres), adding £2,000 as capital expenditure from July 1st to date, and deducting the reserve fund, the planted area of tea and cacao stands in the company's book at £24 12s. 5d. per acre.

The report and accounts having been adopted, and the dividend and bonus declared, Mr. William Keiller was re-elected a director and Mr. James B. Laurie an auditor.

The usual vote of thanks to the chair was carried unanimously.

NORTHERN QUEENSLAND AND THE "TROPICAL AGRICULTURIST."

A Queensland planter, ordering the T.A., writes from Geraldton, Johnstone River, Northern Queensland, on 10th Dec. and says:—

"I have read the numbers received with great interest. Such a paper is just what we require in Northern Queensland, and more particularly the articles relating to coffee and rubber growing. The first-mentioned is likely to be largely planted both in this district and Cairns, the climate and soil being well adapted for its growth. It may interest you to know that the price received by the Cairns growers this season was 9d per lb."

Ninepence a lb. equals 84s a cwt.; a very good price for coffee not very well-prepared probably, in view of the absence of pulpers and proper factory arrangements? These will come in time. Climate and soil are evidently well adapted for coffee in Northern Queensland.

PLANTING NOTES.

Matale as a Tea District.—Matale has—says a contemporary,—not generally been considered a leading tea district, nor has it attracted much attention by its big yields or high prices. Probably its failure as a coffee district towards the end of the coffee era, and the disappointment experienced with cacao by many proprietors, prejudiced planters against it, but Mr. Storey (see our 6th page) again shows that Mariawatte is not the only estate that can boast of continous big yields. It is true that the record for Warakamura does not cover such a series of years as that of Mariawatte, and the total acreage is not so large, but on the other hand the outturn of the 204 acres, which was 993 lb. in 1896 and 1,066 lb. of made tea in 1897, is higher than the yield of the 458 acres of Mariawatte, but does not beat the old 100 acres field of the Gampola estate, though Mr. Storey says his yield has been obtained without the aid of manure. If the yield goes on increasing, we may soon expect Warakamura to equal the record yield of the Mariawatte old field, and over twice as large an acreage. We shall look for future returns with interest, and we are glad to hear that there are other estates in Matale doing nearly as well.

Coffee.—At a meeting of the Coffee Trade one Wednesday to consider the advisability of altering the conditions of public sale with regard to small lots, it was decided that no alteration from existing rules should be made.—*Grocers' Journal*, Dec. 25.

"Hand-Books of Commercial Products."—We have to acknowledge receipt of No. 10, on Adhatoda Vasica. Revised by David Hooper, F. I. C., F. C. S., Assistant Curator, Economic and Art Section, Indian Museum.

Fruit and the Vine.—There are now in Victoria 36,023 acres under fruit—an Australian exchange tells us. The wine-growers are becoming fewer, and have fallen off to the number of 372 during the last year. The area under vines is 28,000 acres. Tobacco-growing is another industry which shows a great falling-off from former efforts in that direction.

A Fireproof Tree.—A Government report from Colombia describes a tree, known as the Chaparro, which is said to be fireproof. It grows on the immense plains of Colombia and the north of South America, and when the enormous fires set going to clear off rank vegetation after the rainy season strip the surface, the bark of the Chaparro protects it, and it grows on unscathed.—*Sydney Mail.*

Cinchona-bark.—Louis XIV. for his "great Encouragement for Useful Discoveries of all kinds and particularly in Physick. 'Tis well known that he bought the secret of the Jesuits' Powder and made it publick." It would seem that towards 1679 an Englishman named Robert Talbot cured Louis XIV. of intermittent fever by a secret remedy, which the convalescent monarch gave him 48,000 livres (with a life pension and a title) to disclose. It was cinchona-bark, and afterwards described in a book as the "English Remedy for the Cure of Fever, published by the King's Command 1682."—*Chemist and Druggist*, Dec. 25.

A Peculiar Fabric, which may find a use for many purposes, is made in Brussels. It is flexible, transparent, and impervious to water. This textile material can be washed off with cold water, like a glass pane, by means of a sponge, and is mainly to be used for portieres, window shades, umbrellas, &c. The patented process for the production of this tissue consists in filling the meshes of a wide-meshed fabric, such as muslin, with chrome gelatine or with a similar material, and then rendering the chrome gelatine insoluble by exposure to light. The fabric is then coated on both sides with boiled linseed oil or fat varnish: the treatment with chrome gelatine and linseed oil is repeated several times, and the fabric is ornamented by printing.

Pearl Fishery in Wales.—Sir Walter Besant (in the *Queen*) is responsible for the following:—

Are there any people in these modern times who carry on the old Pearl fishery of the River Conway? I have come across a few notes on the subject. There was an extremely ancient Fishery here, dating certainly far back before the Roman conquest. It is said that Julius Cæsar obtained while he was in the country a breastplate set with pearls from the Conway, and offered it to the temple of Venus in Rome. It is also said that a fine pearl from the Conway was presented to Queen Catherine of Braganza by Sir Richard Wynne, of Gwydir, and that this same pearl is now in the Regalia. Lady Newborough, in the last century, possessed a good collection of Conway pearls, and in 1780 Sir Robert Vaughan appeared at Court, his hat adorned with a loop formed of Conway pearls. It might be worth while to collect a few mussels—it was in the mussel, and not the oyster, that they were found—and ascertain whether these interesting creatures have lost the art of making pearls.

OUR PLANTING DISTRICTS.

Three more District Reports of an interesting character for last year will be found below. In all three—Central Maskeliya, Pundaluoya and New Galway—crops, with few exceptions, were nothing to boast of. Pundaluoya, we are glad to see, is still going on with cardamoms—a crop which sometimes beats tea for profitable results. More coolies and cheaper rice are wants which we hope this year will see generally rectified. In our Maskeliya Report, we get the best idea yet supplied by any District statement, of how the weather during the past year interfered with tea crops and estimates: may it prove more favourable in 1898 From New Galway, the one staring piece of folly is the non-completion of the Railway Station connecting road. The longer it is delayed, the longer must the railway receipts suffer. We must always maintain that this road should have been made in 1892 by the Government before the opening of the Uva line, and without reference to the few planters concerned in any way. It is *chiefly* required in the interests of the Government and the native trading community of Welimada and adjacent villages.

The Planting Districts in 1897.

PUNDALUOYA DISTRICT IN 1897.

WEATHER.—On the whole very favourable. There have been no very long spells of drought, nor excessive wet and cold. August was the stormiest month.

CROPS.—Tea leaf generally considerably below totals at same date in 1896. The small acreage of coffee left in the district is all on the northern side of the valley (North Pundaluoya and Eton) and gave what must now be considered a fair crop.

CARDAMOMS are cropping well in parts: but heavy, toll is taken of the fruit by petty pilferers—biped and otherwise. The rats are perhaps the worst enemies, and difficult to keep in check.

LABOUR SUPPLY.—Though no very serious difficulty has been felt, most estates, with a few favoured exceptions, could employ with advantage about a fourth more than they have.

TRANSPORT.—There seems to be no difficulty about transport.

ROADS.—In fair order.

THE PRICE OF RICE has been exercising the minds of planters. The Chetties have taken advantage of the recent slip to greatly advance their charges, on the plea that they have been compelled to cart their supplies for long distances. Those who had to go to the Chetties have had to pay as much as R5·30 per bushel.

No particular grievance.

NEW GALWAY IN 1897.

The weather generally during the past year has been very abnormal, a good deal of rain fell during what we consider our driest months, while hot February-like weather was experienced in November, and the past seven days have been rainless.

THE TEA CROP has not been startlingly good, though I hear of one estate that has largely exceeded its estimate. The very little *good* coffee left has cropped fairly well, but the area under this product is getting smaller by degrees and wofully less. Of cinchona the less said the better, but several tons of acacia bark has found its way to the tan yard and the demand for seed of this valuable fuel tree (accacia decurrens) has been pretty brisk, as locally grown seed is more reliable than imported which is often very mixed.

THE LABOUR SUPPLY, as far as quantity goes has been ample, but there has been more "moving on" than usual, which means higher advances and less work, TRANSPORT as usual.

THE AMBAWELLA STATION ROAD will probably be finished to the *cul de sac* by 31st January, 1898, but official pig-headedness and Highland obstinacy combined still leave an impassable ridge away in the centre of the trace, while rumour has it that the station master at Ambawella will have to act the role of toll-keeper in addition to his present arduous (?) duties.

RICE AND OTHER SUPPLIES have been dearer than for many years past, but have always been procurable.

OUR CHIEF GRIEVANCE is the dishonest rupee which appears to have increased the bump of caution already pretty fully developed by our caterers, and when you see an English article with "price sixpence" printed on it, marked R1·25 nett, it's enough to make anyone cave in and long for a planters' Co-operative Store with head office in Colombo and branches in the principal upcountry centres.

CENTRAL MASKELIYA IN 1897.

WEATHER.—The first half of the year just ended might be called nominal as regards weather. At this end of the valley, the rains from N.-E. In April and May were disappointing, which is often the case in these months. The Castlereagh Trig range on the one side, and the Goweravilla and Peak range on the other, divide the thunder and rain clouds that come over from the Hortons and across Bogawantalawa giving welcome rains to the upper end of the valley and all round, but too often leaving us in our parched state with fine flushes drying up and going to bangy. The leaf came in steadily during the first six months and without any great rush in April-May. In fact the older tea gets, the steadier the leaf seems to come in, although two to three months in the Spring and the same in the Autumn are always heavier. The last six months of the year are invariably the poorest as regards flush, but the last half of 1897 was unusually so. The S.-W. monsoon broke with the usual thunderstorms accompanied by wind and rain. This, we think nothing of, any time during June, July and August, but we look for a little sunshine in September and October, and generally get it to dry things up and start growth again; but this year, although there were only 36 days on which rain fell in these two months, there were only seven sunny days out of the 61, and during the whole time there was a cold bleak wind from S.-W. keeping the temperature unusually low, which, succeeding the three monsoon months, retarded growth still more. With the advent of the N.-E., November started pretty well, but this month as well as December did not do so well as usual.

The rainfall for the year was 124·65 on 188 rainy days against an average (for 20 years) of 141·50 inches. The half-yearly averages for the same period being

Jany. to June	rain 55·60 inches	—Rainy days	84
July to Dec.	„ 85·90	„ „	121

CROP—was in nearly every case short of estimates owing to the unfavorable weather. The quality in some cases varied a little, compared with previous seasons, but was on the whole fairly well maintained. The drop in the market was disappointing, but this we have to face and fight as we are doing, that is the market, but an artificial exchange is a direct impost much harder to bear, and I hope will soon be done away with.

TRANSPORT AND ROADS.—Cart transport to the railway station gives no trouble. The hoof and mouth disease talked of so much in connection with light railways and road trams is a bugbear. Our transport is as cheaply and *more conveniently* done than it could ever be by light rail or tramway. Our roads were never better kept or in such good condition. The cost of upkeep is a good deal more than it was a few years ago, but not more, I should say, than proportionate with the extra traffic,

Rice.—The heavy cost has been a great hardship on Ramasamy as well as on the estates. Few proprietors or Companies have been able to charge the full price, but have divided the loss with the coolies, which, under the circumstances, was a fair way of dealing with the matter.

RE-OPENING OF THE BAMBARABOTUWA-RATNAPURA DISTRICT.

The letter elsewhere on "planting, gemming and roading in Bambarabotuwa" reminds us of the wonderful transformation which is being wrought in this old coffee district through the agency and capital of Companies or capitalists represented by Messrs. Finlay, Muir & Co. We have not yet got the full returns or statistics for our "Handbook and Directory;" but we know enough to infer that "Balangoda and Bambarabotuwa" will erelong constitute a rising and important division among the sixty odd planting districts in our list. The neighbourhood of Balangoda was the first scene of operations by Europeans on that side of the country and so far back as 1838, land was selected there at an elevation of 1,800 feet, the luxuriant coffee in the surrounding native villages having attracted attention. In 1840 large purchases of land were made, out of which Massena, Pettiyagalla and New Pettiyagalla estates were created and later on Hatterabage and Lankabarony. But the crisis of 1845-47 brought abandonment in some cases, and the district, as a whole, never recovered a position of any standing until Messrs. Shelton Agar, Layard, Torkington and Bosanquet & Co. began in the later "Seventies," to give Balangoda a name as a tea district. Now we have an almost continuous line of estates from the neighbourhood of Ratnapura right on to Balangoda, lying between the Bambarabotuwa and Rat- and Walauwa gangas with a dozen more plantations detached along the road leading to Bogawantalawa. Altogether, some 25 properties are counted in the Rasagalla division (Balangoda proper) and some 15 in the Bambarabotuwa and Ratnapura division. A most important tea district it is bound to become very shortly. The huge "Hopewell Factory" (belonging to the Company of that name) is expected to turn out eventually 2¼ million lb. of tea annually, and it is intended to be connected by cart road with Ratnapura, 40 miles distant. The late Mr. John Dent Young traced and partly-made cart road comes in usefully here. The machinery of the Factory is to be electrically driven and tea from a group of neighbouring estates is to be made in it. A better watered district there is not in the island; but it is puzzling to think what gave rise to the idea that the Walauwaganga had its source in Walawadowa block for which the Government exchanged at the rate of 3 acres of splendid forest for one,—the true source of the river (which runs through this block) being much higher up! The activity, life and business connected with the opening up of hundreds not to say some thousands of acres with tea in the districts referred to, need not be dwelt on. Verily an immense change is coming over this side of the Adam's Peak range, and if the Kelani-Avisawella railway is prolonged to Ratnapura to catch the traffic at the end of the 30 to 40 miles cart road, its financial success will be still further confirmed. Indeed, we may be sure the several powerful Tea Companies interested will want (and provide) a tramway on the new district road as soon as it is finished, in order to be ready to connect with the Government Railway.

FERTILIZING MANURES.

The fact that, though last year only about one hundred tons of all kinds of chemical manures were imported into Ceylon, this year that quantity is likely to be greatly exceeded, is proof of the attention that is being paid to this question by estate owners, agents and superintendents. Following our policy of drawing attention to anything that can benefit the planter, we today turn to Odam's Special Tea Fertilizer, of which we have the following guaranteed analysis given:—18 to 20, soluble phosphate of lime; 4 to 6 per cent of undissolved phosphate of lime; 3½ to 4 per cent of pure ammonia and 4 to 5 of pure potash. Mr. Keith Rollo, manager of the Wanarajah Tea Company, says of it: "The results have been excellent, as tea has immensely improved and given remarkably heavy flushes, and when pruned two months ago there was magnificent wood to prune on, which means heavy flushes for another eighteen months at least."

The excellence of these manures has been certified by Dr. Voelcker, of London; Dr. Macadam, of Edinburgh; and others, including Mr. John Hughes, F.C.S. Consulting Chemist to the Ceylon Planters' Association. Messrs. Baker and Hall, the Ceylon agents have already this season booked extensive orders for Hatton, Kalutara, and Wattawala. To these districts in a very short time fifty tons of the tea fertilizer will be despatched. As an instance of what the manure will do we are assured that on part of one estate the yield was raised from 300 lbs. to 700 lbs. per acre.

PLANTING IN JAVA AND CEYLON. INTERVIEW WITH MR. FRANK ADAM.

As our readers are aware one of the visitors to Ceylon at present is Mr. Frank Adam who is very largely interested in coffee planting in Java. Mr. Adam came here in the beginning of December last and since then he has been travelling about the Kelani Valley, Kandapola, and Uva districts. His visit will extend till the end of February and during that time he will do some more visiting in the hill and low country. He was the first to interest Ceylon capitalists in coffee planting in Java—men such as Messrs. G. A. Talbot, J. H. Starey, D. & J. R. Fairweather, Wilson Wood, Rutherford, Reid, &c.—and the Glen Nevis Company started in 1892-93 is doing so well that those interested are, along with Mr Adam, now engaged in taking steps to float a Company here to start a further block of similar land in the same district of Java as the Glen Nevis Company. That, and the extension of this Glen Nevis Company, he explained to one of our representatives, who interviewed him, was the object of his visit to Ceylon.

SIGHING FOR THE COFFEE DAYS.

Asked about his impressions of Uva he said:—I have met a good many old coffee planters and one and all of them sigh for the coffee days again in preference to those of tea. With regard to coffee here, I speak with a certain amount of reserve because the situation of the island, the soil, and the climate are entirely different from Java; but my impression

from what I have seen and from what I have heard from old planters is that one cause for the decadence of coffee here is that the plant was forced and grown under unnatural conditions—that under those same conditions the tree in the magnificent volcanic and humus soil of Java would have a chance of a longer life and a chance, with proper remedies, of recovering itself. From what I have seen the soil here is not altogether what coffee loves, but as I have said I speak with some reserve. When I say that coffee has been forced here I mean that it has been grown without shade. In Java we grow the coffee entirely under shade. In the second place until I came here I never understood the meaning of what Ceylon men said when they talked of pruning and handling coffee. That to me is another means of forcing the tree and thereby taking as much as possible out of it; and while it gave good crops as long as it lasted that rendered the tree less able to withstand any outside attacks. Our

METHOD OF CULTIVATION IN JAVA

is to have no topping at all on high elevations, while on lower elevations we top from 5 to 6 feet leaving a flat surface on the upper portion of the tree, and we do not go in for such an unnatural process as pruning and handling. That is in contrast with what I have seen in Uva where they top the tree at about 2½ feet and leave the head of it exposed to the full force of the sun and the air. Another thing I notice is that the coffee, or what remains of the coffee, is growing in some places on slopes amongst boulders and stones. Uva planters seem to fancy that the worst spots for growing coffee are in the sheltered places at the foot of slopes. In Java such steep slopes abounding in boulders and stones woould be looked upon as unplantable, and some of our best coffee in Java is grown in the very spots at the foot of slopes, which Ceylon planters, as far as I am able to judge, seem to condemn.

THE SOIL.

Then in Java, the soil especially where we are, is composed, for the most part, of deep vegetable humus mixed with volcanic ash. Going through the jungle, one is able in most places, to put a common walking-stick up to the head into the ground without resistance. Whereas it seems to me in Ceylon a good deal of the fertility of tea is owing to the climate; we in Java, in addition to our having a good climate, have an advantage in the superiority of our soil.

WHAT COFFEE CAN DO IN JAVA.

I will give you an instance of what coffee can do in Java. The Pioneer Company—that is the GlenNevis Company—started by Ceylon people was first cleared or planted in 1892-93, and the last clearing was completed in 1894-95. At the end of 1897 over a cleared area of about 615 acres under coffee there was produced a crop of the gross value of £22,000 sterling. The amount yielded to the end of 1897 from the first year's clearing (1892-93) showed the equivalent of production of 15 cwt. of coffee per acre. At the end of the third year the land produced on the first year's clearing 5 cwt. an acre; at the end of the fourth year 7½ cwt. an acre; and at the end of the fifth year (1897) it produced the equivalent of 15 cwt. an acre. The proprietors are so well pleased with the results that they are putting all the profits into further clearing, the estate having a large jungle reserve. As regards

THE RAINFALL

it is very well distributed, not one month being without a certain proportion of rain. The heaviest rain-fall is from October to March inclusive, and the average annual rainfall is from 85 to 87 inches. As regards

THE TEMPERATURE

the observations taken at six o'clock in the morning, mid-day, and 8 p.m., in the verandah of the Superintendent's bungalow showed a range at 6 a.m., of not lower than 67 and not higher than 72 Fah: at mid-day not lower than 75 and not higher than 84; and at 8 p.m., not lower than 72 and not higher than 78.

CONCESSIONS BY GOVERNMENT

are not granted to the outside publics but only to Dutch subjects and foreign subjects resident in Netherlands India. The lands, acquired by the Ceylon planters were therefore obtained through myself as a resident, having had 23 years' experience of Java. The conditions upon which the Government give the land are very fair, but they are very slow in making grants. They alienate no land. The land is given out by the Government on a 75 years' lease and if nothing is said to the contrary at the end of the lease it is renewable, so that it is practically ownership that one receives. The Dutch law allows the mortgage of these lands in the same way as freehold property, subject of course to the conditions of the concession. No tax of any kind is payable until the end of the fifth year, when an amount is levied, which varies, but which may be put down at a maximum of one Java guilder (equal to 1s 8d) per bouw, which is equal to 1¾ acres. No obligation is imposed as to bringing the land under cultivation. In British Colonies you are obliged in most cases to undertake to bring so much under cultivation, with n a certain time, but in Java there is no such stipulation. As regards other taxes there is no tax levied, until the estate comes into profitable bearing, when the usual income tax is levied which is somewhere about 2 per cent. The Government reserve to themselves all rights to minerals on the lands and also the rights to open roads and water-courses, subject to compensation being paid to the concessionaires. They will not permit the manufacture on the land of salt, which is a Government monopoly, or the cultivation of the poppy for opium which is also a Government monopoly.

REPORT BY A CEYLON MAN.

A well-known Ceylon man, who is also interested in coffee in the Straits,—I refer to Mr. Donald Mackay—was down in Java and after seeing the lands reported most favourably on them. With regard to Glen Nevis he said that the soil, situation, and growth of the clearings were so far, beyond that of any plantations he had seen in many of the countries with which he was acquainted and the reality was better by far than the descriptions of his Ceylon friends had led him to expect. The sheltered situation, encircled on all sides by mountain ranges, the uniform richness and depth of the dark volcanic soil, and the luxurious growth of trees from two-and-a-half to four-and-a-half years old could hardly be excelled, if it could be equalled, by Arabian coffee in any part of the world. The Liberian coffee trees had made fine progress. As regarded the cacao trees he was inclined to think from their appearance, that they might do better next year (1898) than progress had led planters hitherto to expect. So far

as his information went, the climate of the district generally was comparatively healthy; there did not appear to be much malaria; and the outbreaks of cholera which had been recorded were due more to preventible causes such as carelessness of the coolies themselves, than any unhealthiness arising from situation, soil, or climate, or water. Continuing Mr. Adam said:—The total aereage planted on Glen Nevis and the neighbouring estate by the same proprietors, up to the end of 1897 was about 1,400 aeres of which two-thirds are in bearing. Off this acreage the gross value of the crop for 1895, 1896, and 1897 was £35,000 sterling.

ARABICA AND LIBERIAN COFFEE.

Our experience is that we obtain much more favourable results from coffee Arabica than Liberian coffee. Liberian coffee has been planted in these concessions experimentally but our attention is devoted to Arabica. Liberian coffee experimentally is doing very well, but the Arabian is what we depend upon. We argue that as long as we can find good land to grow Arabica it is better to grow that variety. As a fancy coffee it has very few competitors and we think it much better to leave alone Liberian which may be classed among the coffee of the many and not of the few. The wisdom of our doing so is evident from the fact that during the recent drop in coffee, such rough varieties as those of Brazil, Santos, Liberia, &c., experienced a very heavy fall, while the fall in fancy coffees such as Java, Ceylon Plantation, Guatemala was not appreciable. In fact since I came to Ceylon I have seen a quotation of bold, coloury, yellow Liberian in London at 44s per cwt. while Ceylon Plantation, which is very much the same preparation and quality as Java private estate coffee, was quoted in the same market report at 100s to 102s. Comment upon that I think is needless.

GEOGRAPHY.

Java, for agricultural purposes, is practically divided into two portions. The Western portion which is nearest Batavia and the main lines of sea communication is the part which is mostly seen by the globe-trotter. The climate of this part is very humid and the soil, upon which tea in the uplands is principally grown, is stiff and red. The east end of the island which very few people take the time to run down and see and which is remote from the main steamer lines, is the Garden of Coffee in Java. There is direct railway communication from Batavia to Djemoei quite close to the extreme east and the line has been surveyed for a further extension from Djember (tunnelling through a mountain range) to Bangœwangte one of the principal stations of the Eastern Telegraph Company and the most easterly port in Java. It is from that port that the Glen Nevis coffee is shipped, the distance between the estate and the port being 38 miles, 25 of which are over a good Government post road and the balance over a good riding track. As regards

THE POPULATION

it consists in the first place of Sundanese (Aborigines) inhabiting the west or tea districts of the island. They are less hardy than the inhabitants of the east end of the island who are composed of Javanese (also indigenous) and Madurese who crossed over to Java from the island of Madura immediately adjoining. There are also Malays in Java on the western sea coast, the descendants of Malay pirates in days gone by. These people are not employed as labourers, but as household servants, coachmen, &c. The total of the population is about 23½ millions. The labour supply is very good. We have our own labour difficulties, like the planters in every other part of the East, but these have been reduced to a minimum. When Sir Stamford Raffles was in Java in 1810 to 1812 the population was somewhere about six millions and the figures now show how the natives have increased and multiplied under the Dutch rule. In regard to

THE WORKING OF THE ESTATES

we find it better to have that done by Dutchmen and according to Dutch methods with an Englishman at the head of the whole affair. The system works better than employing Englishmen who are not acquainted with Dutch methods, customs and language. The wages of a cooly on a coffee estate average about 40 to 45 guilder-cents per day.

EXCHANGE

is on a bi-metallic basis and therefore we do not have the fluctuations to which silver countries in the East are subjected.

THE ROADS

are amongst the finest in the world and for the most part beautifully shaded on both sides with tamarind trees.

OTHER PRODUCTS.

The land grows sugar very well indeed; but owing to the continental bounties during the last few years and the change in the tariff duties of America that industry is in a very precarious state. Indigo grows very well in mid-Java on a limited area.. I may mention that at an agricultural exhibition in Calcutta some seven or eight years ago I remember to have seen that five prizes were given for Indigo. The first, second and third fell to Java and the third and fifth to India. Java also produces tobacco which is grown on a limited area naturally on account of the humid climate which it, like tea, requires. It also grows tea, as I have indicated, also cacao, vanilla, nutmegs, cinchona, &c. In the west of Java there is some of the finest table rice in the world, and throughout the whole island, there is the ordinary native rice. Of late years petroleum has been discovered, principally in mid and east Java, and some of the Companies have obtained splendid results.

TRIP IN SOUTHERN INDIA: NEW NILGIRI RAILWAY.

Hill Grove Hotel, Coonor, Nilgiris,
South India, Jan. 11th 1898.

We arrived here yesterday at noon having come by kind permission to the foot of the Ghat by the new Nilgiri Railway. This railway, I am told, has been some 12 years in construction, but it is hoped that it will now be opened for traffic in the course of a few months. It is a very difficult piece of work. It is a narrow-gauge railway with cog metal in the centre after the fashion of some of the mountain railways on the continent. The engine goes up behind the train, and the cogs secure the train from slipping back in case of any breaking of coupling irons etc. The line is now complete with the exception of seven miles which as I have said, it is hoped, will be completed all the way to Ootacamund in a few months. It is almost certain there will be

some heavy rock slips here and there in the future, but let us hope that precious lives may be spared. This railway will probably be much used, and probably Coonoor and Ooty will soon grow in importance. With such a magnificent climate, and charming scenery there can be no doubt that these two places will become very important in a short time. Coonor is about the elevation of our Nuwara Eliya, and Ooty is a 1,000 feet higher. Already rents are rising very high, and land which Mr. ———, could have bought at R20 an acre when he came here first, can't now be bought at R2,000. Mr. J. G. Gregson has just secured a large bungalow here called "The Lodge" as a home for missionaries during the hot season. The bungalow has good bedroom accommodation, and extensive grounds with pretty nooks under shady trees, and commands a most magnificent and extensive view. Mr. Gregson and his family will reside in a smaller bungalow during the hot seasons of the three years' Travancore work.

I have just tasted, at Mr. Thomas Stanes' bungalow, Springfield, some delicious strawberries gathered this morning from his garden. Mr. Stanes tells me that the *Tea* here, though of good quality, yields only about half the amount of leaf yielded in Ceylon, or about 250 lb. an acre. Coffee seems to do well.

We expect to stay here till Thursday morning, when we are to go on to Ooty till the following Monday. Then probably we shall descend to Coimbatore.

CEARA RUBBER.

The Madras Government has recently issued a resolution on the experimental cultivation of Ceara rubber in the Malabar district. The experiments have not been very encouraging but the Government is of opinion that the matter should be kept in mind and that it should be considered whether the cultivation cannot be improved. The following are the reports which form the subject of the Resolution :—

Report by M. R. Ry. V. S. Guruuatha Pillai, Acting District Forest Officer, Sonth Malabar, dated Nilambur, 6th February 1897.

'In January 1895 one hundred Ceara rubber trees were tapped in Iravallikavu both morning and evening, each tree was tapped six times, *i.e*, twice a day for three days and 10 lb. of rnbber was collected which was valued at 1s 6d to 1s 9d per lb. in England.' 'In the latter end of December 1896, 309 trees were tapped and 24 lb. of rubber collected; the largest tree tapped, *i.e.* 8 feet 9 inches in girth gave 8 oz. of solid rubber and the smallest, *i.e.* 3½ inches in girth gave 1-8th of an oz.; on an average 1 oz. per tree was collected.' 'Method of Tapping.—A few trees were tapped by making incisions on the trunk of various shapes and little cups made from leaves were pinned underneath to receive the milk, bnt it was found that no milk could be collected in this way. The milk trickling down the stem from the incisions was after three days peeled off in long strips which gave a few grains of rubber per tree, but the rubber was of good qnality, *i.e.* clean and very elastic and free from disagreeable odour.' 'The other trees were tapped as follows :—the large roots near the surface were laid bare, and incisions 1½ to 1 inch long and ½ an inch apart were made on the exposed roots with a bill-hook and the milk collected in little pits dug in the gronnd nnder the roots to receive the milk. The trees were tapped twice a day for three days *i.e.* between 6 to 10 a.m. in the morning and between 4 and 6 p.m. in the evening and on the next morning the milk was found to be coagulated in hard tongnes. These were removed and the tree tapped again as before.' 'It was noticed that the trees bled more freely in the early morning than late in the day; *i.e.* a tree tapped at 6 a.m. would bleed for 10 to 15 minntes, while those tapped later would only bleed for 5 or 6 minutes, as the heat caused the milk to set mnch quicker and clog the milk ducts. Again trees growing on moist alluvial soil bled more freely than those growing on dry soil, a small sized tree with a girth of 21 inches standing on good moist soil and little distant from the surrounding teak gave 4½ oz. of rubber, while a tree growing on dry soil and surrounded by teak though 37 inches in girth gave only ¾ oz. of rubber. Particular notice was taken of the trees tapped in Jannary 1895, the incisions made then were completely healed and those that bled well then bled freely even this year. From this it is plain that soil and surroundings have a good deal to do with rubber-producing qualities of the Ceara.' 'In March and April 1896 attempts were made to tap but with little success, the trees bled but little, the weather being too dry and hot and the trees leafless, the best season to tap is between December and February.' 'From the experiment tried has been noticed that trees planted 20 yards apart *i.e.* 100 trees per acre (the soil being favourable *i.e.* deep moist alluvial soil) will produce on an average 4 oz. of solid rubber per tree per annum when 3 feet in girth in abont 18 years.'

Report by Mr. H. Tireman, District forest Officer, North Malabar, dated Manantoddy, 29th Augt. 1897.

'Twenty-three Ceara rubber trees were tapped at the end of May this year. The average girth of these trees was 21 inches. The yield was 8 oz. of rubber. These trees were tapped three times on three consecutive days. They had never been tapped before. In July, during a break in the rains, 67 trees, all of which had been tapped last September, were again tapped once. Their average girth was 27 inches and the yield was 20 oz. I will do some further tapping after the rains are over. I do not, however, think that the Ceara rubber is of any use as a rubber prodncer, compared with Ficus elastica and Hevea Brazillensis.' —*Indian Forester.*

NEWS FROM BRAZIL.

FROM AN EX-CEYLON PLANTER—MR. SCOTT BLACKLAW.

Rio, 15th Nov. 1897.

Three things have engaged public attention in Brazil for the last six months. The Little Rebellion in the State of Bahia—the Low Price of Coffee—and the Diminished Value of the Currency.

It has been

A BAD THING FOR THE COUNTRY.

This expedition alone cannot have cost less than 6,000,000$, already a vote of 4,000,000$ has been asked for from the Chamber of Deputies.

When the Vice-President began this struggle in December—by sending the forces of the Union to the aid of the State of Bahia, exchange on London was over ninepence per milreis; by the time the struggle ended it had fallen to seven pence. That is from 26½ milries to a pound sterling to 34½. The par value is 8.mil.-890-reis). Whenever any political commotion occurs or when the Government adopts any policy which may lead to drafts of money on the Treasury down goes exchange; for it is well known that the expenditure can only be met by increasing "the promises to pay" either in the shape of a loan or in the issue of paper money. Paper money in this country is different from yours. With you any one can demand to be paid in metal, and the gnarantee is the deposit in the coffers of Government of sold silver, and your exchange is regulated more or less by the value of silver. Here there is no guarantee but the Government promise to pay," and one is forced to accept payment in this forced paper currency. A Bank note of an English or Scotch Bank says distinctly *on demand* the value to be paid in *sterling*. In Brazil metal currency that is gold pieces of the value of twenty milreis and silver milreis, are

to be seen occasionally; but they sell at about $3\frac{1}{2}$ times their value represented in paper—a twenty milreis gold coin can be sold for from seventy to seventy five milreis in paper! For a long time it could not be seen that it was the excessive issue of paper money that had lowered exchange. The popular belief was "Oh it is the English Banks that are bringing it down in order to make large dividends." The Government understand the reason now, for they want to sell or rent the State Railways, and apply the proceeds to the redemption of paper money. In the same sort of local arguing the present low price of coffee is not due to overproduction, but speculation and the grasping policy of the foreign merchants. This fallacy is beginning to be exploded too.

This leads me to the question of

COFFEE

to which I really intended to dedicate this epistle but was led by the current of circumstances to go off at a tangent, on other subjects not so interesting to your readers.

Coffee has been pouring into Santos and Rio at quite an unprecedented rate. Some days as much as 50,000 sacks (of 132 lb.) at the former and 30.000 sacks at the latter. For the season ending 30th June of this year (crop 1896-97) the shipments amounted in round numbers to 8,500,000 sacks (of 132 lb.)—That is to say 5,500,000 from Santos, and 3,000,000 from Rio—against 7,200,000 sacks from the two ports for season 1895-96, and 6,600,000 for 1894-95. For the ten years previous—with the expection of 1891-92 and 1892-93 when the shipments were in round numbers 7,300,000 and 6,400,000 sacks respectively—the average—in round numbers—has been 5,500,000 sacks (of 132 lb.) from the two ports. The effect of these heavy crops has been a great fall in the price of the product. The greater part of Brazilian coffee is shipped to the United States, where it is always quoted in cents, and decimals of a cent per lb. Coffee there and in Rio it is classed in numbers according to quality from No. 1 to 9. The Rio papers quote generally from 6 to 9. No. 7 in the average of Brazilian Coffee No. 6 is superior and No. 8 is inferior. Up till the end of Dec. '96 the price for that year was about 12 cts. per lb. for No. 7, and 11 cts. per lb. may be taken as the average for ten years previous to that—fluctuating a good deal but seldom falling below that figure. Since January of this year the price has continued to fall steadily until in November this year No. 7 was quoted in New York at $8\frac{1}{2}$ cts. per lb.—and with the prospect of a million more sacks from the two ports—this increase being from Santos alone—the price is not likely to rise.

With regard to

THE ESTIMATE FOR 1897-98

opinions differ. A British exporting house telegraphed to London a few days ago—the fact being noticed in the Rio papers—that the Santos crop for 1897-98 would be 6,500,000 sacks (of 132 lb.) Rio which receives coffee from Minas Geraes, and Espirito Santo States—in addition to that of the State of Rio—will not ship less than its average quantity—3,000,000 sacks.

The State of Rio gives alternately large and small crops and this will be its small crop year, but on the other hand new plantations have been extending in the two sisters States at a remarkable rate,—justified of course by the substantial prices ruling for some years previous to this—which will more than make up for the yearly diminishing crops of the State of Rio de Janeiro.

Every year about this time (Oct., Nov. and Dec.), we see in the newspapers reports of there having been during the flowering season too much drought or too much rain, which has destroyed a great part of the embryo fruit, but somehow the yearly extending clearings—especially in the State of Sao Paulo—are seldom taken into account. The acreage in Sao Paulo of planted coffee has more than doubled during the last ten years, and until this check of low prices, and consequent inability to raise money, new plantations will still continue to extend, for there in the far West there is any quantity of forest land, and near a Railway.

I notice in the newspapers as referring to what I mention above the following—" A Coffee Commission Agent in Santos, an educated and practical man, who has been taking a run through the Coffee Zone, affirms in a letter sent to us, that the Planters cannot at present count on anything but a small crop."

"A great part of the blossom has not set in consequence of a southerly wind which blew during the opening of the flower."

The same paper adds a letter from a Planter in the interior to a commercial house in the town of Sao Paulo:—

"The crop of 1898 will be one of the smallest we have had since 1860. The flowers of August and September are completely lost, a flower is showing for this month (October), part has already fallen and the other part is in spike. It appears the plantations will flower later, say the end of December and January, which will be a great inconvenience to the Planter."

When I was Coffee Planting in these parts it was not customary to count on either too early or too late flowers; from the later end of September to the beginning of November was the flowering season, on which to estimate crop. I do not think the seasons have changed much since then.

The question remains—can coffee planting in Brazil pay at the present low price of the article? The consideration of this must be left to a future communication. The same as regards the supply of Labour.

A. SCOTT BLACKLAW.

OUR COMMERCE FOR 1897.
II.—IMPORTS.

The fluctuations in Exchange have made business in Imports from sterling countries of a somewhat risky nature. An occasional rise or fall of one penny in the rupee brought a disturbing element among prices, and it may be safely assumed that dealers and consumers benefitted accordingly, to the disadvantage of importers. Prices locally become depressed with any important rise in Exchange, but on the other hand when Exchange falls, it takes a considerable time to get prices up again. Business in Imports is at present much impeded by the tightness of the money market, and until rates of discount are easier sales must be small.

Cotton Goods.—During the past year the tendency of prices of Cotton Goods was downwards and the following figures show the fall in the more important qualities:—

			Per Cent.
Grey shirtings, a fall of		..	$7\frac{1}{2}$
White	.. do.	..	8
Prints	.. do.	..	20
Coloured woven goods do		..	10

The fall in prices of prints is partially due to importation beyond the Island's requirements, and the losses sustained from recent forced sales will no doubt prevent a recurrence of oversupplies. It must be borne in mind that the offtake in the Island is a limited one. During the first nine months of 1897 there were bonded 495 cases of printed cottons, as against 362 cases during same period of 1896, showing an increase last year of nearly 100 per cent. A large crop of American cotton (probably the largest on record), coupled with every promise of a good crop in 1898, has kept prices in Manchester and other manufacturing centres at a very low level. Manufacturers appear to have bought largely both for immediate and forward supplies, and it follows that there will be a very large production of cotton goods this year at cheap prices.

ESTATE SUPPLIES.—Prices in general have been steady. Tea Lead became dearer as the year closed and is likely to continue dear for some time. Tea Chests have been in ample supply and prices were much lower on the average last year than was the case in 1896.

METALS.—A large and steady business has been done in iron and other metals. Prices of bar-iron at home were a little dearer, but the variation has not been great. Hardware has been imported steadily, but business in this is of a hand-to-mouth character.

SPIRITS.—The bazaar trade in Spirits has been a large one, but it is questionable if this trade is in a healthy condition. More than one dealer has failed to meet his engagements during the past year, and the readiness with which continental exporters shipped cheap liquors for sale on consignment, will no doubt be lessened when returns are received. The following figures for the first 10 months of 1897 and 1896 are interesting:—

	10 Months 1897.	10 Months 1896.	
Entered for Home Consumption	2,113	1,420	Cases Brandy
	1,939	4,114	,, Gin
	6,592	5,386	,, Whisky

The taste for gin is apparently on the decrease, whereas both brandy and whisky show ncreased demands.

RICE.—The year 1897 will be memorable as a year of dear rice in Ceylon. Soolye rice at the beginning of the year was worth R9·50 per bag, whereas in September the price had gone up to R10·50 per bag. Other qualities of rice were correspondingly dear. As the year closed, however, prices gave way considerbaly (about R2 per bag) and with a large crop in Bengal and Burma, we may look for a continuance of cheap rice for some time. Some fear was held of a poor crop in Southern India, but recent rains have dispelled any fear of short supplies in that district.

COAL.—Indian Coal continues to be imported in largely increasing quantities, to the exclusion of English and Australian Coal. Cheapness is the great point in Indian Coal, and the quality of output is on the average better than in former years. It may be noted that Indian Coal is being largely used by local mills in place of firewood which has become scarce and dear. Local consumers can obtain supplies of good Indian Coal from R14 to R15 at the Wharf.

OUR STAPLE EXPORTS FOR TEN YEARS AND DISTRIBUTION FOR 1896 AND 1897:

NATIVE PRODUCTS.

On page 539 we dealt with the figures relating to the Exportation and Distribution of the principal products of the Coconut palm, and showed that the steady development of business, from year to year, had evidently been hindered by the low prices and slack demand ruling for Coconut Oil. In contrasting the smaller shipments of Oil last year with the figures for 1894 and 1892, we remarked that, had the prices been better and the demand brisker, there was no reason why we should not have exported as much Oil as in 1892, with perhaps a slight reduction in some of the other products. A careful analysis of the figures shows that the last qualification requires revision, as the excess in Oil-exports of 1892 represents a far larger number of Nuts than is represented by the development of business in Desiccated Produce and in Nuts in the shell; while in Copra, too, 1892 beat last year. The result is that the shipments of produce in 1892 show an excess, calculated in Nuts, of about 48½ million Nuts, over the exports of 1897. So that, so far from there having been an advance, there has been an actual falling-off! The figures are instructive, and not the less so because they were unsuspected, and we place them for the two years, as represented by Nuts, side by side to facilitate comparison:—

	Exports in 1892. Nuts.	Exports in 1897. Nuts.
Oil	275,488,500	204,800,000
Desiccated ..	11,549,172	36,163,356
Ripe Nuts ..	9,717,386	13,610,508
Copra ..	30,148,160	23,878,624
	326,903,218	278,452,488

The above figures are based on the calculation that a cwt. of Oil is equal, on an average, to 500 nuts; a lb. of Desiccated kernel to 3 nuts; and a lb. of Copra to 2 nuts; and they show diminished exports in 1897 to the extent of 48,450,730 nuts as compared with five years ago! The Island's production having decidedly grown in that period, the shrinkage in exports must be referred to a slack demand, leading to a fall in prices which resulted in the retention for home consumption of a larger proportion than ever of the coconuts produced in the Island; and home consumption represents an enormous quantity which it is most difficult to calculate accurately.

We have not included the exports of Poonac in the above calculation, as Poonac is, in a sense, a waste product, the outturn of which depends on the outturn of Oil—every cwt. of Copra yielding 2-3rds the weight of Oil and 1-3rd of Poonac; but the inclusion of the figures will not avoid the general conclusion. In correspondence with larger exports of Oil than in 1895 and 1896, last year shows more Poonac sent away; but we never rejoice at the growth in exports of a substance, every pound of which is needed in the Island for the feeding of stock, and for increasing the productiveness of the soil. So long, however, as the prices now ruling are maintained—averaging about R80 per ton—only working and milch cattle, owned by the well-to-do or the more enlightened classes, will be fed with the stuff; and it is not surprising that nearly 200,000 cwt. of Poonac were exported. Our largest customers were Belgium and Germany, which took over 90,000 cwt. each, the United Kingdom being content with 4,846 cwt, Italy and Australia being the only other countries, which took this product in small quantities. It is said to enter largely into the production of special cattle food; but whether it is given to stock as imported into other countries, or "made up" in attractive forms, it is curious that we should be sending away any cattle food at all, while importing from India immense quantities of gingelly poonac, cotton seed, cattleoid and bovinia, which are regarded with more or less favour by different people for cart-cattle and milkers. The other minor products of the Coconut palm are rope, yarn, and fibre,—in all of which a fair average business was done, the exports of every one of them having been exceeded once or oftener during the decade. Looking to the large number of small Coir Mills which have been erected in

various parts of the Island, the comparative stagnation in exports may cause some surprise; but the local consumption, especially of rope, must be immense; and herein consists alike the value of our chief Palm and its safety, that the home demand for its products is continually growing and that their circulation adds to the health and industry of the community. The United Kingdom continue to be our largest customer for Yarn and Fibre, taking away about two-thirds of the total exports; but of 11,732 cwt. of Rope exported, no less than 11,486 cwt. found their way to Singapore.

Of the other lowcountry products, the next in importance to Coconuts is Cinnamon; and that has shown a steady development for some years now. We have long regarded the increased production of the spice, which is so closely identified with the very name of the Island, with much the same feeling with which we contemplated the growing output of cinchona, after receding prices had reduced the profits from it to a minimum, and indeed wiped them out almost entirely; but the increasing output of cinnamon the past four or five years has not caused the usual uneasiness. Prices, which had run down seriously through over-production, began to look up since 1893, and the larger exports, which have been stimulated by the better prices, have not led to a fall. It is reasonable to believe that the demand which has continued notwithstanding growing supplies, is a real demand and has not been created for speculative purposes. Yet, growers who contemplate extensions would do well to note that the last three years have shown larger exports than were ever before recorded; that in 1897 both Quilled Cinnamon and Chips have separately shown the largest quantity ever exported; and that a spice is a luxury on the advancing demand for which the same reliance cannot be placed as on that for articles of diet and necessaries of life. On the other hand, enquiries have reached the Colony about Cinnamon from London which indicate faith in its future—one English capitalist wanting to invest £1,000 in any Ceylon Company Limited for the production of Cinnamon! A satisfactory feature, too, apart from the maintenance of prices in the face of growing supplies, is that Cinnamon counts almost every nation among its importers; but the fact that less than one-half of our production is now taken by the United Kingdom, shows how the Suez Canal has diverted trade from London.

The exports of Plumbago have been fairly satisfactory and so have prices; but higher prices have ruled before now, and if there be a reversion to them, there is no reason to suppose that we shall not be able to send away more than the 357,257 cwt. we did last year, of which the United Kingdom took 159,675, America 88,810 or about one-half the previous year's supply, and Germany 63,518. The figures show a falling-off in the trade in Ebony (due, no doubt, to the gradual exhaustion of the supply); in Sapan wood (in which there ought to be expansion, if the value of the tree on boundaries is duly appreciated); in Palmyra fibre (in the collection of which much destructive work has been done); and in Kitul Fibre, which ought to show better figures. Cinnamon Oil shows a considerable increase, and is capable of further expansion. So also with Citronella Oil, which is much in demand now for perfumery and about the different qualities of which there are great disputes in the chemical world at present. Considering the scarcity of money during the larger part of last year, and the interruption to trade with India, caused by the plague and famine, there is every reason to be satisfied with the position of Native Products, in which, however, we hope to record more substantial progress during the present year.

PLANTING NOTES.

RUBBER—says Messrs. S. Figgis & Co.—has been a capital market at advancing prices, which are 3d to 4d per lb. higher than a year ago for mediums. Supply reduced from Zanzibar, increased from Borneo and Penang.

THE CEYLON TEA CORPORATION LIMITED.—We direct attention to a report in our daily issue, and *Tropical Agriculturist*, of an extraordinary meeting of the shareholders in this Company and to an interesting statement by the Chairman, full of praise of Doteloya and Penylan estates; but not much reference is made to the other properties of the Corporation.

CEYLON LAND AND PRODUCE COMPANY.—The report of the proceedings at the annual meeting of this Company—see our daily and *Tropical Agriculturist*—makes pleasant reading in view of the continued prosperity of the Company. The Acting Chairman (Mr. Wilson being in Ceylon, was able to give a good deal of information about cacao, which is of special interest at this time. The present Company seem to be very fortunate with this product; but not so with Liberian coffee, which is not regarded with favour.

THE CEYLON PROSPECTING SYNDICATE LIMITED.—In our Daily and *Tropical Agriculturist* we give a report of the proceedings at the annual meeting of this Company last month. As will be seen from the speech of the Chairman (Mr. A. W. Lawder) the Syndicate are now in possession in Ceylon of 191 acres of free hold property which is reported to be good gemming land and in order that their work may be prosecuted vigorously and on a large scale they have had plant manufactured for dealing with the alluvial gravels of the island in a manner hitherto unknown locally. Capt. Pilkington, who followed the Chairman, spoke in a most hopeful manner of the possibilities of the gemming industry here, the position of the Company being all the more favourable, in his opinion, that they had the sole right of using Mr. Lockhart's machinery in the island. Several of the shareholders who took part in the proceedings expressed themselves in terms which must have been very gratifying to the directors in regard to the wisdom of carrying on operations on an extensive scale and as to the suitability of the plant; and Mr F. L. Shand gave the meeting the benefit of his experience in gem-mining in the neighbourhood of the Company's property. He alluded to the "Golden Grove," "Everton" and "Ranweltenna" properties and expressed his belief that the rich gem-bearing gravel which existed there, extended over the Company's land—the illum of which he valued at 10s per ton. The Managing Director produced convincing proof of the value of the land owned by the Company in a case of sapphires of a quality very scarce in the market and commanding splendid prices. It was his experience that valuable gems were constantly being found in ground adjacent to the recognised gem-pits. The proceedings altogether are of a very interesting and promising character.

Correspondence

To the Editor.

CEYLON TEA IN CANADA.

Toronto, Nov. 30.

DEAR SIR,—We had the pleasure of a visit from Mr. McKenzie, accompanied by Mr. Blechynden, representing the Indian Tea Planters' Association. They are both we think very well satisfied with the wonderful progress Ceylon tea has made in this part of Canada, and is making in other parts. There is no article being offered to the public today, that is so largely advertised as Ceylon tea : there seems to be a craze among tea dealers to advertise. We ourselves were the originators of Ceylon tea advertising; in fact, before we took it up, no tea was advertised, but there are dozens of "Richmonds" in the field today.

We are sending you on with this, a couple of papers, one of last Saturday, and another of Monday, showing the extent to which Ceylon tea is advertised in Toronto.

The ousting of Japan teas in the Montreal districts is a harder task. Still, this is gradually taking place, and we have no doubt that in years to come practically nothing but Ceylon and Indian tea will be used in Canada.

In the United States we are making very great progress. We opened up branches there, in Buffalo first, at the instigation of Mr. McKenzie, and we had grave doubts as to the ultimate results ; today we have none. It is only a matter of "holding on," when we shall catch the trade there, as we have in Canada. We have now offices in Buffalo, Pittsburg, Detroit, Rochester, Cleveland, and latterly Boston, in which place we had a fine exhibit at the Food Fair recently running there. This was very successful, crowded houses, afternoons and evenings ; and it continued for over a month. The results to us have been magnificent. We have been shipping on in hundred or two hundred box lots until the other day, when we thought it best to get a carload of twenty thousand pounds ready, which we expect to despatch in a day or two. We have also about four tons to go forward to Buffalo, Pittsburg and Cleveland : in fact, we are kept at work night and day.

Mr. McKenzie has urged us on to push the business down by the Atlantic, in the Provinces of New Brunswick, Nova Scotia, and Prince Edward Island. You will perhaps understand that, although this is in the Dominion of Canada, it is a thousand miles further off than many parts of the United States that we are now in. Those provinces are exclusively black tea drinking districts, but the chief teas in use there are China Saryune Congous. We are making great efforts now to introduce Ceylon teas, and are meeting with fair success.

We venture to send this on to you, as it may be interesting to many of the planters.—We are, yours truly,

THE "SALADA" CEYLON TEA COMPANY,
P. C. LARKIN & Co.

[The Advertisements are large and attractive and are an undoubted evidence of the earnestness of the Company, in pushing our teas.—ED. *T.A.*]

TEA GROWING IN RUSSIA.

ITS FUTURE, AND EFFECT ON BRITISH GROWN TEAS.

DEAR SIR,—While travelling in Sweden I met a gentleman who kindly gave me a letter of introduction to Mr. Popoff of Moscow, the proprietor of a tea plantation in Russia so I decided to visit Moscow, and if possible see the tea plantation.

AT ST. PETERSBURG.

After a very pleasant stay in Stockholm I took steamer for St. Petersburg, where we arrived on the third day. After presenting my Passport to a Military Officer, who took a keen interest in the valued document notwithstanding it was written in English, and he knew not a word, my baggage was examined and I was allowed to land.

At St. Petersburg my spirits were somewhat lowered ; and all said it would be impossible for me to visit the tea plantation, as even Russians were not admitted, and they were very certain no foreigner would be allowed to see what was closed to them.

AT MOSCOW

Leaving St. Petersburg on the third day, I arrived at Moscow on the following morning, What a city to behold ! Buildings of all sorts, and sizes packed in the smallest possible space ; and as the houses are not numbered, the population close on a million, and few streets named, the new arrival must engage a guide as the "Svostchik" (Russian driver) has no idea of locality. To the Tourist there is much of interest : footpaths which in many places will not allow pedestrians to pass in single file, badly paved narrow streets the equal of which it would be hard to find. At every corner is an image of the Saviour, with a glass containing a lighted wick floating in oil. At each of these Altars the Svostchik takes off his hat and crosses himself some thirty times in the most devout manner, but trust him not, for in the same breath he will lie, and rob you in a manner that would put the lowest oriental in the shade. The leading merchants have their offices in the old city round which the famous Chinese wall still stands ; the greater part of Moscow today, is outside the Chinese wall, and with few exceptions is as much behind the times as the old city.

CARAVAN TEA.

The cold was intense which made it all the more interesting to one who has lived for some years in the East. On the morning of the second day having procured a guide and droskie, I drove to the office of Mr. Popoff, where I met one of the chief clerks, who informed me that Mr. Popoff would be in at 2 p.m. I then drove to a large warehouse where a quantity of Caravan tea had lately arrived ; the tea was in chests sewn up in hides with the hair still on, and placed next the chest ! What with the close atmosphere and the smell from the hides (some of which were still damp), five minutes was as much as I could stand, and glad I was to get in the open. From that day I have, and always will carry my own tea when in Russia, and take good care it is not "Caravan tea." Ceylon, or Indian will be good enough for me.

TEA WITH A SLICE OF LEMON.

From my youth, having heard much of "Russia's tea with a slice of lemon," I was prepared

for something "extra special" on my arrival at St. Petersburg. Soon did I find it, as many other good old stories of Russia were, a huge delusion. The tea as drunk by the Russians, is very weak, with little flavour, and as a finish, it is served in thick tumblers. The custom of drinking tea in tumblers dates back to 1812. When the French soldiers entered Moscow they are said to have broken all the crockery, and only a few tumblers were found on their departure. In these the tea was served to the higher officials, and ever after it has become the custom. At 2 p.m., I again entered the office of Mr. Popoff, and was met by the chief clerk, who informed me, "Mr. Popoff was not in, he was away from home, and would not be back that day." I told the gentleman I would call the following day. "It will be of no use, Mr. Popoff is away, and will not be back." I thought it strange after my interview in the morning as then not a word was said as to Mr. Popoff being out of the city! I asked for Mr. Popoff's address, as I wished to write him? "Don't know, he is away, and may not be back for a month." My doubts were then confirmed; this gentleman must be a pure-bred Russian; not one word of what he has said is true. The following morning, I went to the side entrance, and thus avoided my friend of the previous day; sent in my card, and was shown into the Committee room where I met Mr. Popoff—"the gentleman who was away, did not know where, and would not be back for a month or more!*"

Mr. Popoff the founder of the firm "K. & C. Popoff" (whose packet teas are known throughout the length and breadth of Russia), is very interesting to talk with, and all the more so to a Ceylon Tea Planter, as some of his ideas on the growing and preparing of tea are to say the least strange from our point of view. Mr. Popoff cannot understand why we in Ceylon, and India will spoil our teas by preparing them with machinery when we have so much cheap labour? On his plantation where the cost of labor is 1s. 6d. per day and free lodging it is possible they may use a roller and sirocco for the cheaper teas, but it will be much against his will as he knows it destroys the natural flavor of the tea!! Mr. Popoff says the difference between hand rolled tea and that rolled by machinery is as great as, "a good tune played by a fine orchestra, and the same from a German organ"! Mr. Popoff who had visited China, Java and Ceylon, intends to adopt the planting system of the former, as it is far a-head of that in Ceylon!!! The prayer of the Indian and Ceylon tea grower will be that not only Mr. Popoff, but others who may be interested in the cultivation of tea in Russia, will not only think, but carry out his ideas. Before leaving Mr. Popoff promised to send me a packet of tea grown on his plantation in the Caucasus, and a card of admission to the Superintendent who would show me round.

A few days later, the tea and card having arrived, I took the express for Odessa, where I arrived in forty-eight hours. During my stay in Odessa I had the tea valued by the principal tea buyer in the South of Russia; "good tea suitable for blending, worth six-pence per pound C.I.F. Odessa." With 1s 10d per lb. duty in his favor the Russian tea-grower could realise 2s 4d. The question is—should it pay to grow tea at that price what is the Government to do?

BATOUM.

Make it a Government monopoly, place an excise duty, or stand to lose five and a half millions sterling which is the revenue from the imports of tea! Knowing the Russian Government as I do, I am very certain it will not be the latter. Take petroleum from the wells at Baku (Caucasus). The price free on board at Batoum is 30 Kp (7½d) per pood (four gallons) the excise on that consumed in Russia is 60 Kp. (1s 3d) per pood, just double the cost of the oil. Tobacco grown in the Caucasus is taxed in the same way, and leaves the grower little profit. On the 13th November I sailed from Odessa for Batoum, where we arrived on the 18th after an interesting passage, as the steamer called at many ports including Sebastopol, where I visited the battle fields of the Crimea. Batoum has grown much of late, and now has a population of 24,000. That it has a great future no one can doubt, as not only is it the seaport for the great petroleum wells at Baku, the export from which in 1895 was 957,711 tons, valued at £3,634,000 sterling; but it is the terminus for the Siberian railway, the importance and future of which few have any idea. On landing only one fort at the entrance to the town is visible, but during my stay I discovered it to be a second Gibraltar with guns all over the mountain which forms a back to the town.

RUSSIAN PLANTATIONS.

Calling on the manager of Mr. Popoff's retail establishment I was astounded to learn that even he was not admitted to the plantation. He also informed me that the Minister of Finance at St. Petersburg, after driving to the plantation, was not allowed to enter it The Svostchiks demanded double fare to drive to the plantation, as the snow in parts was deep, and they require four horses, so I decided to wait till the following day when I took train to Chakva and visited the first Russian tea plantation, which I now discovered was started by Colonel Solovitzoff in 1885. During my stay at the Caucasus I visited the Solovitzoff plantation, which has 100 acres of tea, Popoff's plantation with 250 acres, and the Imperial Domains plantation with 150 acres. Colonel Solovitzoff, a retired Officer of the Engineers, was the pioneer tea planter in Russia. In 1885 he planted 36 trees that were imported from China; with the seed gathered from these 36 trees, 250 out of the 500 acres in the Caucasus have been planted. The much-prized seed bearers stand three feet high, and are to be seen in front of the factory; that they will each year bear seed in abundance they may be assured, as they are a jât known only too well at great cost to many in India and Ceylon. I went through a clearing in its seventh year and found it not as far advanced as tea in Ceylon or India in its third year. This is partly due to the short summer, bad seed, and strong winds from the sea to which all the plantations are exposed.

MR. POPOFF'S PLANTATION.

Mr. Popoff has his plantation closely guarded. On arrival at the gate three Circassians, each armed with two swords, three pistols, and a rifle, presented themselves and demanded my permit. Handing my card of admission through the bars, two entered a hut to study the document, while a third kept guard. After some fifteen minutes, when they had satisfied their curiosity, one ascended the hill to the Superintendent's bungalow; another fifteen minutes in the sleet, and the messenger returned

with orders to open the gate, and for the first time a tea planter, and a British subject, entered the plantation which is kept such a profound secret. On ascending the hill I met the Superintendent, who showed me round the plantation, which has cost over 800,000 Rbls. (£82,000 sterling). It reminded me very much of the hill paddy-fields in Ceylon, as all the plantation is laid out in terraces five feet broad, the cost of which must have been very great, as the land in parts is steep. I saw tea trees from India, Ceylon, Java, and China, all of which looked well, notwithstanding the two feet of snow which lay on the ground, and the severe weather which had set in unusually early this year. Only a small area is planted with seed from India and Ceylon, and this has been condemned by Mr. Popoff. Perhaps his Chinese tea-maker thinks the leaves too long !

MR. CHINAMAN.

The Superintendent has no experience in tea, but informed me he is learning the work from their head Chinaman. This gentleman was brought from China and draw the nice sum of £50 per month. Along with him are ten other Chinese who, from all accounts, draw salaries that will enable them in a few years to return to their country and live on the fat of the land. Last year they imported 6,000 lb. of tea seed from China, out of which Mr. Popoff raised 49 plants. Mr. Chinaman may be counting on repeat orders till they raise the required number of plants ! !

THE CAUCASUS.

In Odessa I was told that a large area suitable for tea was to be found South East of the Caucasus near the Caspian sea ; but from what I have seen, and on what I believe to be reliable information, I report as follows :—South East of Caucasus, South of Baku, and near the Caspian sea there is a mild climate and fair soil, but as there is little or no rain, and all the year round is subject to violent wind storms it would be impossible to grow tea. On the East coast of the Caspian sea there is poor soil, no rain, and in summer violent hot wind storms that dry up all before them. On the Caucasus and to the north of Baku the winter has proved too severe. Last year out of the 5,000 plants put out near Tiflis not one survived to see the spring. South-West of the Caucasus, on the coast between Soukhoum and Batoum, there are about a hundred thousand acres where it would be possible to grow tea, but at no part is it more than three miles from the sea, and in many parts the mountains are very steep close to the sea. The soil is good and rainfall plentiful, and in winter there is snow and sometimes twelve degrees of frost. In summer they often have strong winds with hail which does much damage to the tea. From the 1st of April to the end of September the bushes will sprout, but after July the flush is checked by winds and hail. Tea of the right jât planted in the shade might in the eighth year give 200 pounds per acre; with labour at 1s. 6d. per day, I fail to see where the profit would come in for the grower even with 1s. 10d. per pound duty in his favour.

THE GOVERNMENT PLANTATION.

The latest addition to the Government plantation is 50 acres, planted with seed ; the trees from which it will never give 100 lb. of tea per acre. The cost of opening the land, seed, planting, and up-keep for first three years was, £5,750 sterling, which is equal to £115 per acre. To this must be added the cost of land £10 per acre and Superintendent's salary ! The Superintendent's estimate for this clearing is as follows :—5th year 60 pounds of tea per acre ; 6th year 90 pounds per acre ; 7th year 130 lb. ; 8th year 200 lb. ; and 9th year 250 lb. for which he hopes to get 3 Rbls. (6s. 6d.) per lb. It is possible that he may obtain his estimate for the first two years, but I am very certain he will be sadly disappointed in his returns for the following years ; as also the price he will realise. At 3 Rbls. per pound the Russian tea grower would have a nice profit, but when he comes to realise 1 Rble. 8 Kp. (2s. 4d.) per lb. he will find the balance on the other side.

So India and Ceylon may count on Russia as a good field for their increasing supply.—Yours truly, R. V. WEBSTER.

Sophia, Bulgaria, 10th December, 1897.

P.S.—Since writing the above I have received a valuation from Messrs. Gow, Wilson & Stanton, of the tea Mr. Popoff gave me while in Moscow from his plantation in the Caucasus "6d. per lb." This confirms the valuation of my friend in Odessa.

A NEW VEGETABLE.

Dec. 21.

DEAR SIR,—In the December number of the "Agricultural Magazine," which you publish as a supplement, the *Canna edulis*, with its various misleading names of *Tous-les-mois*, St. Vincent arrowroot and Queensland arrowroot, is referred to as a plant considered to be equal to, or more valuable than, the real arrowroot, and is said to be grown in Badulla and the Rayigam Korle. I brought this plant some time ago to the notice of our late Director of the Royal Botanic Gardens and have figured it and described its cultivation, with other plants not generally known, in some papers which I hope soon to send you for publication. Meantime I may mention that the distribution of the *Canna edulis* is very much wider than stated above : it is largely grown in coolies' and in natives' gardens in nearly every planting district. The tuberous roots are an excellent curry vegetable, and when dried and pounded, yield a large amount of flour which is used for cakes, etc. The plant, one of the most handsome of the *Cannas*, with its flame-coloured flowers and broad foliage tinged with red, is called by the Tamils "Valay sembu" (plantation yarn), and by the natives "Bût-sarana" (Refuge in Buddha). It produces no seeds and is grown from stools in the same way as cardamoms are usually planted.—Yours faithfully, Br.

CACAO CULTIVATION IN CEYLON: OUR OLDEST TREES; AND PRACTICAL EXPERIENCE: REASSURING NEWS.

Dec. 31.

DEAR SIR,—The intelligence (save the word !) is only startling in its silliness regarding cacao and its limit of age. There was fine cacao in bearing on Rothschild 20 years ago when I was S. D. there and I believe my old P. D. (J.G.C.), still wonders at its vigorous cropping. There are trees 40 years old in Peradeniya Gardens, and nearly 50 years old on Pallekelly. We have trees here 20 years old and only just in full bearing. They have been *growing* all these years and would touch at 30 feet apart. Udapolla and Eadella have trees a score of years old, 30 and 40 feet high with 40 and 50 feet spread, bearing grandly.

No ! Cacao is good for a century. You try it, as the old man did with the raven.

Close planting has something to answer for. 16 by 16 is quite close enough for Forastero and alternate trees could be taken out when it is *13 or 14 years old* and the field, left at 16 by 32, later on reduced to 32 by 32, and then cacao walks would be worked as orchards, and we should get twice and thrice the crops we do now. Jambed in 10 by 10 in the early days of inexperience, it is a wonder, worse has not happened to cacao, one of the very best investments a man can make. Bide-a-wee and we'll see a boom yet in Theobroma Cacao. "Calabacillo" is hardly a new name. It is the calabash shaped variety red and yellow and the most inferior but hardiest.

Possibly we have not the soil of some more favored cacao countries; but we have a climate it would be hard to beat, and I much mistake my fellow cacao Planters if they cave in to any of the pests that have yet attacked their trees. Helopeltis was and perhaps is in some parts bad enough in all conscience but it is most arbitrarily local and nearly always confined to a few corners exposed to paddy fields, swamps or bare chenas adjoining.

Of canker we'll say nothing till the experts speak. The case is *subjudice*, but the disease is *not* incurable. It is *not* general, and it does *not* attack some varieties—at any rate it has not yet.

Contradict most emphatically the utterly unfounded statement that "Cacao dies out, I may say, universally, when it reaches the age of 13 or 14 years" because facts prove otherwise and many Forasteros *are not full grown till past that* age!!—Yours faithfully, C. G.

No. II.

Matale, Jan. 2.

DEAR SIR,—Our experience of cacao in Ceylon does not certainly limit its life to 13 or 14 years. The writer referred to by you contributing to your morning contemporary may well be termed a startler and can have no experience of Ceylon. The bold assertion "at any rate cacao dies out, I may say universally when it reaches that age"—(13 or 14 years) needs greater authority to support it, than the experience of the writer can claim. There are plantations in Ceylon where thousands of trees may be seen of 20 years of age at least still in their prime. While there is a tree in Kandy opposite the Military Hospital, on the premises now in the occupation of Dr. Keyt, which cannot be less than 40 years old. The late Mr. Blackett mentioned to me, when we were discussing this same question regarding the longevity of cacao, that he knew the tree from his earliest recollection of Kandy. Where therefore writing about the limit of life enjoyed by this tree, it would be more safe to rely upon such writers as Berthelink, than to take the statements of modern paragraphists writing from London.

The extracts from the Trinidad Agricultural Society reported by you are very interesting to cacao planters.—Yours truly,

A CACAO PLANTER.

SALT IN AGRICULTURE.

DEAR SIR,—I was very much interested in the discussion in Council on the Salt question and much cheered in the way the Government accepted the motion. It was over ten years ago that I attempted to get up an agitation for the issue of salt at cheap rates for agriculture in general. I pointed out to coconut planters that considering the natural home of the coconut palm, it became imperative for them to apply salt freely to coconut trees growing inland so as to compare as nearly as possible with the natural conditions under which the palm grew. My agitation met with no response and Dr. Trimen, who was appealed to, pointed out to the analyses of Lepine as a refutation of my contention. He stated that the small quantity of salt a coconut tree required was supplied to it by one S.W. monsoon storm. I pointed out that apart from its manurial value, salt benefitted vegetation by the mechanical and chemical changes it effected in the soil. Mr. Cochran's interesting analyses establish the necessity for salt as a manure for coconuts. It will be invaluable for application in the heavy and dry soil of many favourite coconut districts.

Wherever did the Colonial Secretary get his figures of the probable consumption of salt for agricultural purposes? They remind me forcibly of the figures of the estimate of goods traffic on the proposed Puttalam Railway. In both instances the figures are based on assumptions. In the one case the existence of so many acres of coconuts is a fact that that: salt will benefit them is a fact. It is therefore assumed that salt will of necessity be applied to all existing coconut plantations. I will be agreeably surprised if one-tenth of the estimated consumption will be reached in the near future.* Government may, I think, safely dismiss the fears they now run to entertain that should cheap salt be issued they will be unable to meet the demand.

I do not know whether it was under inspiration you wrote recently that in spite of the scheme for railway extensions sheltered by the Governor and in spite of what was placed before the Secretary of State for his consideration and sanction, there may yet be a possibility of the Chilaw-Puttalam route being adopted to the North in place of the Kurunegala-Anuradhapura route. If it be so, it shows that the recent journey of the Governor has borne good fruit in that, it has convinced His Excellency that the better and more reasonable route had not been originally adopted. Everything seems to have been sacrificed to serve the cost of construction of a few miles of railway to reach the Terminus at the North. Given a cheaply constructed railway, statistics prove that it will pay. This news must prove very pleasing to the Puttalam resident who so persistently fights for a railway to his adopted home."—Yours truly,

MARAVILLA.

DAYS OF OLD IN UDA PUSSELLAWA.

Haputale, 5th Jan. 1898.

DEAR SIR,—I am glad to see by your New Year's Correspondent signing "Y.", that another of the small band of pioneers who first opened the Udapussellwa district, is still to the fore, "may his shadow never be less" and may he have many more happy New Years to spin us a yarn of the days of old; but if he will pardon me, I will correct him on a few minor points in which he has erred. On the 1st of January, 1858, I relieved poor "Dick" Crawford on Alnwick, James Wilson on St. Margarets, William Boyd on Tulloes, and A. Vallance on Kirklees; we were a small band of four, who trod those hills and valleys in 1858, but your correspondent dates from a year or two earlier. —Browning opened Alnwick, the first 100 acres, another 100 acres being opened by Crawford, after which I got charge, but in a few months' time, I had to exchange billets with John Ward and go to Massena in Balangoda, both estates then owned by the Baron Delmar. James Wilson died in Stainton's Hotel

* Of course, a possible maximum has to be provided for.—ED. *T.A.*

without his leg being amputated, the Rev. G. Sprott and myself being with him to the last. William Boyd after leaving Tulloes in the Sixties went over to India, and for some years, managed an estate there, and some years after came back to Ceylon and died in Colombo as related; he was, I believe, a partner in the short-lived firm of Ackland, Boyd & Co., who collapsed in the forties. A. Vallance leaving Kirklees, had charge of the Peradeniya sugar estate, before his death and died in the island, I believe. I don't know your correspondent and should like to exchange greetings with him and tell him that the first tea plants I saw were some on Kondagalla estate before entering Nuwara Eliya on the Rambodda side, owned by the brothers Worms and on my taking charge of Kahagalla estate in this district at the end of 1858, I found a large nursery of tea plants or rather trees eight or ten feet high, planted by my predecessors Littlejohn and Sandy Davidson, but prior to this the late Mr. John Nietner, who came to the island in 1853 as Botanist for the Baron Delmar to introduce new products into Ceylon (when I was a clerk in the office of the late Mr. J. P. Green) went to China, brought over tea seed and grew them near Negombo on land of a coconut estate bought from Dr. Elliott then proprietor of the *Colombo Observer* as it was called. These with some tea grown on Rothschild estate, Pussellawa, by Messrs. Worms, the history of which you have given in your Directories, were the first tea of the China sort introduced into the island; if anyone knows of earlier introductions of the tea plants by private individuals you can I fancy tell us in your next *Vade Mecum* the Ceylon Directory for 1898.

J. A.

CACAO IN CEYLON.

Ukuwella, Jan. 6.

SIR, –*Re* Cacao dying out in 13 or 14 years, I remember seeing a tree at the lower bungalow Keenakelle, Badulla, in 1876, which was then some 15 or 20 years old. Is that tree still in existence? And what about the Peradeniya trees which must be some 30 or 40 years old? Truly a little knowledge is a dangerous thing. MC.

[The cacao tree on Keenakelle will be found described in our "Handbook and Directory." It is now not less than 40 years old and is flourishing 4,000 feet above sea-level! But, alas for Peradeniya trees, see a report elsewhere.—ED. *T.A.*]

DRYING TOMATOES—AND EXTRACTING FIBRE.

DEAR SIR,—I would be much obliged if through the *T. A.* I could get some information about drying or preserving tomatoes; could they not be dried the same as fruit and in the same kind of machine and what machine would be the best for a small quantity and cost?

Also how to extract the fibre from the pineapple leaf. Is there a machine to do it properly, I hear Death's machine only partially cleans the fibre; then what is the fibre so cleaned worth? And cost of hand machine, output of fibre per day, &c. —I remain, dear sir, yours faithfully,

TOMATO.

[Who can tell us about drying tomatoes? A "Desiccator" machine might suit the purpose. Experiments in Ceylon, in extracting fibre from pine-apple leaves, have not been successful in yielding a paying result.—ED. *T.A.*]

DRYING TOMATOES.

Greenfield, Bambalapitiya, Colombo, Jan. 7.

DEAR SIR,—If you will put your correspondent in direct communication with me, I shall be glad to explain to him cheap and effective ways of drying Tomatoes, and extracting Fibre from Pineapple Leaves.—Yours faithfully.

E. T. JENKINS.

[Our first correspondent is a planter in Sumatra, and he will be duly advised; but could the information not be given *pro bono publico* to include in our *Tropical Agriculturist*?—ED. *T.A.*]

CEYLON TEA IN AMERICA.

EXTRACTS OF LETTER RECEIVED FROM MR. WILLIAM MACKENZIE, CEYLON REPRESENTATIVE IN AMERICA.

From the Secretary, "Thirty Committee," Kandy.

SIR,—I enclose for publication extract of letters received from Mr. William Mackenzie, regarding his work in America.—I am, sir, your obedient servant,

A. PHILIP,
Secretary, "Thirty Committee."

Kandy, January 8th.

I send some films showing in miniature an animated advertisement we have been flashing nightly in a very prominent position in New York. The figures are life-size and are shown in motion—just like the Biograph or Cinematograph in London. Thousands stand and look at this on the street.

The first shows a Chinaman offering a lady a cup of China tea. The second shows her ordering him out after she has tasted it and found it disgusting as her face in a photo—not included—expresses.

Next comes *the loose piece*: a Japanese offering his tea: then No. 4 where she again shows her dislike.

Then comes an Indian servant with pure machine-made Ceylon and Indian; she tastes it, is delighted and has a second cup.

The lady is an actress, and acts her part beautifully. We are trying to arrange to have the thing in several large cities, but it is difficult and expensive—while still novel it is very catching advertising."

I have been at Montreal to see ——'s Canadian Agent. I made an arrangement with the Firm in London for a vigorous push in Eastern Canada to cost £1,500, of which our share is to be £500. I was led to this by the then existing difficulties of getting fine teas into the States. I say "then existing" because I am glad to say the difficulties have been emoved.—A 26 sieve is now to be used, not a 16. This is entirely due to the very clever manner, in which Mr. Blechynden fought our battle while the importers were divided and each was trying to get his own in and others excluded. Mr. B. took the matter up, and carried it direct to Washington.

I have also been to Boston, where we were interested in some exhibits in a Food Show. The show was well attended and was most interesting. I am sorry to say I found while our teas were being advertised, greens, oolongs, and mixed were being served and sold. The excuse was the old one, "We cannot pay expenses unless we give what the people want. Much of this has to be winked at."

I enclose a letter showing how Salada Ceylon Tea (Larkin's Brand) has been progressing in Eastern Canada served from his Montreal branch. You will note the business has trebled in a year and his Manager is confident it will again treble during the next twelve months. A much smaller increase even will be satisfactory.

Instead of spending £3,000 a quarter, I propose to spend £7,000 during first half of next year and £5,000 during second half. Little can be done in July and August, as the weather is too hot, and everybody is away seeking cooler climes. If you agree with me arrange that £4,000 be remitted at end of December and £3,000 at end of March, please.

I have sent some advertisements and other matter in other envelopes.

The very low price of coffee is against us this year. It is being retailed at about half of its price two years ago.

3. I have not much to tell you this week. Dealers are holding off under the belief that there will be soon a fall in the price of the Tea. One paper indeed has a paragraph to the effect that wires from Colombo have already reached here, quoting a fall on the local market there. I have wired to London to ascertain the truth.

Mr. Blechynden and I went down to Philadelphia last week to visit a Food Show where our teas were being exhibited. As is getting too common we found "greens" and "mixed" being sold as Ceylon and India Teas. This is going on to a greater extent than we like, but it is difficult to stop it.

The largest wholesale grocers in America with 300 travellers have made up their minds to handle a Ceylon—Indian tea package—I see I mentioned this in my last letter—but it is now a settled matter, as they have ordered 10,000 lb. in one-and-one-half lb. packages.

———

Copy. *Letter referred to.*

Toronto, Oct. 5th, 1897.

Dear Mr. Mackenzie,—I am giving you a clipping from a letter from our man, whom since hearing from you, we have kept down in New Brunswick, Nova Scotia and Prince Edward Island. You see we are not only introducing Ceylon tea in Canada and the United States, but also in France, through their Navy.

I am enclosing Japanese advertisements that appeared in the *New York Herald*, *New York Sun* and *Buffalo Express*; it is really poor advertising, although they have taken fine positions they are paying pretty sweetly; it is a column on the front page, in the *New York Herald*.

I am enclosing avertisements that appeared in last Saturday's papers in the city of Toronto, in all, fifteen in number. Ceylon tea is well advertised here, isn't it? I am ambitious to bring about the same state of affairs in the Provinces of New Brunswick, Nova Scotia, and P.E.I.; then we have Canada well covered, and I have no doubt that after two years work, and possibly less, there will be as large a consumption of Ceylon and Indian Teas in those three Provinces, as there is today in Ontario.

In Quebec Provinces we are making great headway and no mistakes. Last week was the biggest week we have had in the city of Montreal; in Quebec Province our sales *for the city* were 1,810 lbs; in the country East of Montreal, 930 lb. making a total of 2,740 lb. I am just giving you below, what the increase has been in the Province of Quebec and thereabouts, which includes, of course, everything done from our branch there (Montreal)

		lb.				lb.
July	4 '96	517	..	July	3 '97	1,758
,,	11	577	..	,,	10	1,645
,,	18	603	..	,,	17	1,646
,,	25	705	..	,,	24	2,560
				,,	31	1,861
Aug.	1	651½	..	Aug.	7	2,079
,,	8	914	..	,,	14	1,743
,,	15	905	..	Aug.	21	1,764
,,	22	791	..	,,	28	2,416
,,	29	411	..			
Sept.	5	505	..	Sept.	4	2,615
,,	12	974	..	,,	11	2,632
,,	19	1,527	..	,,	18	2,421
,,	26	983	..	,,	25	3,078
Oct.	3	1,040	..	Oct.	2	2,740
				,,	9	3,346

This is very encouraging isn't it? Last week would have been very much larger for the Montreal Branch, but our traveller was home part of the time.

There is no doubt about it, that the same state of affairs will come about on the American side, but it will take time, as it has here. You would be surprised at the talk that goes on in Buffalo now. Very often latterly, our man will be received, when he goes into a store, with "Oh no, we don't want any more 'Salada,' we have got a Ceylon of our own now; yours isn't the only Ceylon tea!" . . § Of course, we never told them that it was, but they seem to have formed that impression themselves and when some wholesaler came along and sold them a box of Ceylon tea, and they immediately jump to the conclusion that they can displace "Salada" with this. We generally find that, in the course of another week or so if they are low in "Salada" when the man calls again, he gets an order, because people want what they are used to and know to be good and they won't take the loose Ceylon tea for it, that is, in most cases. We have the wholesales still sending in for small lots, but very small ones. The trade is a regular every day trade, but so small that I do not feel like keeping tab on it, although I am going to start now, and have books kept at Buffalo and Pittsburg, showing the exact sales every week. I did not keep this in Montreal for a long time after I had started, because it used to cost us about two dollars a pound to sell the tea. It is paying us a good round profit now every week, latterly never less than $40 or $50, and as big as $76; and my man down there thinks he will soon be able to put another '0' to the end of it.

You will be glad to hear that, at the beginning of this week, we had 71 accounts in Cleveland and many signs up. We are now running in the "Press" there.

Mr. Larkins', manager in Montreal, tells me he feels quite confident the sales by October, 1898 will be 10,000 lb. a week (at the Montreal Branch) that is, that they will in the next 12 months treble, as they have done in the last year.

A large dealer in Philadelphia was shown a Ceylon sample—a pekoe—a few days ago. He liked it, and asked how much there was left; but being told there was only 25 chests he said, I don't taste a tea unless there are at least 300 packages. He has been accustomed to buy from standards of China Tea. I send some samples of the advertisement, used in Canada by Tetley & Co., under our joint scheme for working the Eastern portion of Canada.

Also—The tea trade "Tussle" we are putting into magazines and newspapers just now.

I am going out west next week, Pittsburg, Chicago, Detroit, Cleveland, Buffalo, etc.

1st Dec., 97.

My last letter was that of 19th November, written before I went west. Mr. Blechynden accompanied me and we have returned much pleased with what we saw and heard. Much more interest is now being taken in our teas and the convictions are gaining ground that they have come to stay. Two or three of the largest importers still refuse to carry a stock of Ceylon or Indian, but they are constantly taking a few chests from those who have stock, showing that their customers insist on getting the teas.

You would have seen Gow, Wilson's circular showing the great increase in American importations during first nine months of this year, as compared with same months of last year, viz., 8,464,000 lb. as against 5,560,000 lb. Whether our estimate of 12,000,000 lb. is to be realized or not, time must tell. The recent rise in price, stopped many orders. I have heard of a few large ones sent to Calcutta, because low grade teas there are cheap enough to meet the limits given.

I am glad to say Lipton's managers, here and in Chicago, are again pushing vigorously, and are meeting with much success. Their recent progress with packet teas surprises themselves. I saw today a letter from a New York grocer asking for samples and prices and ordering 200 lb. Now Lipton's people had never solicited this man's trade, they had never even heard of him, but he evidently had enquiries for the tea. A letter which I enclose from Miss Parkinson gives her experience of the increasing interest created by our advertising.

Lipton and Franklin Macveagh & Co., of Chicago have been introducing our teas into dozens of towns, small and large, in the Far West. The latter firm assisted by us are advertising the Naban Ceylon Tea in the most important papers between Texas and Washington territory on the west coast.

It was chiefly because of the work done by this firm that I asked the Committee's permission to spend a portion of the Fund beyond Chicago.

The new regulations extorted by Mr. Blechynden are working favourably for us, but thousands upon thousands of boxes of China and Japan teas are being rejected. There is quite a panic among the importers of these teas. They had hoped to get rid of the rejected teas by damping them in Canada, but there we have check-mated them. We started the subject in the press and went to Toronto to get the trade to take the matter up. I enclose a leader from a Toronto paper and today I have a letter from the Editor of the "Canadian Grocer" to the effect that the Government is on the alert, and that a large quantity was seized at Montreal yesterday. Today I hear a number of importers there, were trying to induce the Manager of an English Tea Firm here to take charge of the rejected teas and ship them to London to be sold by auction there. I am afraid that will be the field for most of the rubbish as blenders can buy it very cheap, and put it in their packets.

We are to write fully on the subject to the London Association.

Of course, we are making the most of the rejections in our advertisements, and by doing so have made the would-be importers very angry. One very angry representative of the class called yesterday at the office of the "Journal of Commerce," and threatened to prosecute the paper.

I hope to sail for England next week.

GAME PROTECTION IN CEYLON.

Madulkelle, Jan. 11

SIR,—I am glad to see Mr. Farr's statement on the Game Protection Society. It shows that the Society is in a fairly good position, and that some good work has been done, and it is certainly not the fault of the Society that much more has not been effected. The Government, which is in the first place responsible for Her Majesty's dumb subjects, has been all along grossly negligent in its duties, and it would appear until we stirred it up about five years ago, was absolutely unaware that it had any responsibility or duties to perform towards these subjects.

We have had plenty of Ordinances passed. They cost the Government next to nothing, and are doubtless a salve to its conscience ; but whoever heard of a single Ordinance connected with game protection, except that relating to elephants, and possibly buffaloes, being enforced?

As a matter of fact, it may be taken for granted, that the Ordinance so far as deer are concerned was never intended to be enforced ; the Ordinance passed, but no machinery was ever supplied. It would surely be more consistent to repeal this Ordinance at once. The offence would at least be done away with ; and Her Majesty would be the gainer in a few hundreds of law-abiding subjects.

I would strongly urge upon the Society to appeal to the Government for sanctuaries for game, say of 10,000 acres each, in the districts of Tamankadua, Bintenne, Lagala, and various game districts ; and for the appointment of rangers for these sanctuaries supervised by officers of the Forest Department with a substantial addition of pay for the extra work involved.

This, it seems clear to me, is the only way to protect deer in the big game districts. At present the Game Ordinance, with the exceptions I have stated, is a glorious farce. The Axis deer is rapidly being wiped out ; and the Axis is *par excellence* the game of the great wilderness of the North-East and South-East. That game can be protected, and is only too susceptible of protection, I have good reason to know, having for the last four or five years taken about 2,000 acres in hand, on my own account, chiefly Crown forest, be it noted.

In this sanctuary, by dint of thrashing every marauder, smashing his gun and shooting his dogs, I have succeeded in collecting and preserving a very respectable number of Sambhur and other game. They are, I say, susceptible of the protection offered, because they remain in spite of the fact that I continually hunt the ground for hogs, which I destroy both for the sake of the sport and for the protection of cardamoms.

The Sambhur very soon recognise the fact that they are protected. The result is that on any fine day, when the uplands are free of mist, you may see them, and a very pretty sight they are.

Beyond the sphere of protection you may look for a single shot for a long weary day and look in vain ; because the intelligent officers of the Crown, who are supposed to be protectors of Her Majesty's property, seem to think that issuing licenses to vagabond estate coolies will conduce to the preservation of that property.

I have no hope whatever for the protection of game in the low-country except by means of great sanctuaries kept up at some expense, and under European supervision, and the Forest Officers and Government Agents are the proper persons to be entrusted with the work. Acclimatization should be actively pursued, and will I am sure repay labour. My own particular sanctuary has become a most interesting place in a very short time. I can show Sambhur in numbers, some Elephants, Barking Deer a few only, the altitude being great ; wood-cocks, which I have never shot at, migrate annually, in increasing numbers, and as many as 4 or 5 may occasionally be flushed in a morning between January and May. Carp I have turned into a few big pools in the forest, and they are thriving ; and later on I intend to try trout.

I heartily commend to the Game Protection Society as the result of my short experience, the formation of many such sanctuaries, not only in the low-country under Government protection, but in the mountain zone too.

If my protection has been afforded in rather a high-handed manner, I apologise to Her Majesty's representatives ; but it has certainly had very good effect, and I propose to carry it out until matters "develop;" but, if I am bound down to keep the peace, and the *ruck* rabble of vagabond meat-sellers are let in to destroy Her Majesty's wild subjects in defiance of the law, and the deer and wild fowl disappear, it will be time for me to be shifting too from a land where such inconsistency in the application of law is permitted.

E. G. R.

CHEAP SALT FOR AGRICULTURE.

Jan. 11

SIR,—"Maravila" in a recent issue on the aid subject doubts the probability of the estimates of traffic reported by me *re* Railway to Puttalam. A simple denial or doubt would not carry much weight in any controversy unless substantiated by reason, in the absence of which I can afford to treat his effusions with silence.

I should on the other hand like to impress upon your readers that a railway to Puttalam will undoubtedly cheapen the price of salt which is now sold at Puttalam at the rate of 2 cents per lb., but at about double that in the Chilaw district and at a still higher price in the Negombo district. This is certainly due to the great extent of transport by Canal, which on the other hand gives little or no

profit to the poor padaboatmen who resort to adulteration with sand to make up their losses. All this will be put a stop to, with the advent of a railway to Puttalam, which will cheapen the price of salt and stop adulteration thereof with sand

RESIDENT OF PUTTALAM.

PLANTING, GEMMING AND ROADING IN BAMBARABOTUWA.

DEAR SIR,—In reference to the article signed "Critic" in the local "Times" and headed "Gemming in Ceylon," the 860 acres Kondurugalla jungle referred to belonged to one Marikar, and was bought, I think, by Mr. L. Davidson, Messrs. Finlay, Muir & Co.'s late V. A., for somethingunder R30 an acre and subsequently re-sold to Messrs. Finlay, Muir & Co. I am not sure at what price it was bought, or re-sold. The cutting of the road and connecting it with the Ratnapura and Balangoda districts did much anyway to add to its value, but for this, the land was difficult of approach. The road was cut by Messrs. Finlay, Muir & Co., when Mr. Gray was on Hopewell and enabled Messrs. Finlay, Muir & Co.'s, Visiting Agent to ride in at Ratnapura end and out *via* Balangoda. The land now belongs to Messrs. Finlay, Muir & Co. and felling operations are going on apace both there and on Bambera Ellakande, the adjoining land. I should say quite 2,000 acres or more are being felled in this one locality by this firm. I believe watchmen were actually put on to keep off petty gem-diggers and pilfering and contractors engaged on any work on this block are likely to delay finishing off, to enable them to have a good search for gems while so engaged.

It is strange that the old Bungalow sites on these blocks command a view of Hapugastenne Bungalow, and the Hopewell Wellawalamukelana are *all* more or less seen from one another, thus enabling the old Coffee Planters in 1848 to keep up a series of signallings, in troublous times. From S. D's Bungalow at Hopewell, only 12 miles by road (and about four in a direct line) from Balangoda, the Colombo Lighthouse flash is plainly discernible, while on a clear day steamers can be seen—and a view of the sea coast, as far as Hambantotta is obtainable in another direction. This would make an excellent signal post—with an electric light right across the Island,—or a Heliographing station, if occasion arose.—I remain yours,

PET ELEPHANT.

FIBRE AGAIN: A CEYLON FIBRE-PLANT PRAISED.

DEAR SIR,—It is evident that the maxim of being denied honour in one's native country is also shared by our Sanseviera or "bow-string hemp." A correspondent to the "Florida Agriculturist" writes that Sanseviera Zeylanica though introduced into Florida as an ornamental plant, where it has been christened the "trout plant," probably on account of the peculiar spots or markings on the leaves, yields a fibre "of the finest and strongest yet discovered;" and that its cultivation in that country is about to assume the proportions of an important industry. Eighteen months after setting the plant, it is said, the first crop can be cut; but two crops annually will be yielded thereafter, the yield of clean fibre per acre being five tons. The writer in question also hints at the prospect of there being within the next twelve months thousands of acres in Florida, planted with Sanseviera; and that, if recent investigations were not misleading, "there will be no need to go to Klondyke for gold."

That the Sanseviera fibre is of a very fine quality, comparatively easy of extraction and well appreciated in the market, has already been testified to by planters in Ceylon. Yet though the Sanseviera is a jungle plant here, it has not so far proved quite amenable to our methods of cultivating it; or at least its cultivation has not been considered sufficiently remunerative to oust antecedent products. In our jungles the plant is almost invariably met with on rocky soil, a fact wich suggests that the principle of affording it deep rich soil is at fault, and moreover that the Sanseviera is a most suitable plant for planting up waste and rocky corners on lowcountry estates, thus excelling the far-famed rhea or ramie which generally requires the richest of soils. The Sanseviera also enjoys total immunity from any disease or insect pest.

It is curious to note that in Dr. Watt's Dictionary of Economic Plants, there are no less than 25 vernacular names quoted for the Sanseviera, which, however, are mainly Asiatic, in Europe the plant is commonly known by the name "sword plant."—Yours truly,

NIYANDA.

[We quote the Florida extract in full in our *Tropical Agriculturist.* The soil we saw in Florida was generally light and of brackish-sand as in he Rajatalawa-Chilaw district.—ED. *T.A.*]

CEYLON TEA IN AMERICA.

Kandy, Jan. 17.

SIR,—Mr. Mackenzie writing from London on the 24th December commences as follows:—

"I returned home last week and in a more hopeful mood as regards progress in America, than on any previous occasion. Our teas are getting better known and more appreciated every month. He goes on to say that the packet business of a large English firm, which sells, Ceylon and Indian teas in America has doubled and another trebled during the year. He gives encouraging details of the manner in which a Chicago Firm known to be considerable purchasers of tea in the Colombo market, are advertising in the west states that two American Firms are now buying regularly in London and holding stocks of our tea in New York and refers to several English houses who are doing the same, one of the latter in particular doing a very large business and handling no China or Japan bear at all." He concludes as follows:—"The most satisfactory sign of all is the number of small dealers who are everywhere holding our teas now and the number of houses putting up their own packets.

"My report with the accounts will follow in a few days.

"I send you a memo, which you might publish for the benefit of Colombo shippers, showing the difficulties which arise when teas are shipped different from the samples. It comes from one of our best friends.

"I also send some of the indefatigable Larkins communications, they will show you how we get the rejected teas stopped entrance into Canada, also our advertisement in last Canadian Grocer."

CEYLON TEA IN THE CONTINENT OF EUROPE.

Mr. R. V. Webster who recieved as grant of £500 from the X X X Committee for the purpose of advertising Ceylon tea on the Continent of Europe writes that he has visited the principal towns in Belgium, Holland, North Coast of Germany, Denmark and Sweden, and that he has succeeded in interesting a great many in Ceylon teas

and is sending small shipments forward to each town. The duty in Belgium is 4d per lb. Holland 2½d, Germany 3d, Denmark 4½d, Norway 1s, and Sweden 3d. He has made arrangements with the largest tea importing firm in Stockholm for making known Ceylon tea in Sweedm, and also with a Firm of good standing in Norway. He said "I can quite understand the British Commercial Agent giving Russia a wide berth. It has taken two days hard work to get my tea through the Customs, and then I had to pay duty on nearly double the correct weight in this country there is no redress and foreigners are treated with the greatest contempt.

Mr. Webster subsequently visited St. Petersburgh, Moscow, Kief Odessa, and nearly every seaport in the Black Sea and writes as follows :—"Large quantities of Ceylon Tea is finding its way to Russia and I am certain there is a great future in this field for our teas which are mostly used for blending with China."

I know of two Firms who each imported last year over a million pounds of Ceylon Tea :—"The imports of Indian Teas into Russia have fallen off during the past few years, while those of Ceylon have very much increased, as they find them better suited for their blends."

Mr. Webster completed his three months tour on the continent by visiting Austria Hungary and Italy and has appointed Agents in many towns who will endeavour to push Ceylon Tea. He will return to Ceylon in the ss. "China" due on the 25th instant,—I am, dear Sir, yours faithfully,

A. PHILIP,
Secy. to the Thirty Committee.

India Tea Association 138 Front Street,
New York, Dec. 7th, 1897.

The main trouble with India and Ceylon teas in the American market is that when teas are sold forward on samples that it is most difficult, if not impossible to make the goods match the sample.

A firm may order from standard sample a couple of hundred chests of tea, when the shipment comes forward this is found to be made up of several " breaks " from one garden, or even from distinct gardens. These lines must differ somewhat under present conditions of manufacture, and, as a consequence, the buyer has a right, and exercises it of rejecting those which are least like the sample. Indeed, he may reject the entire shipment. This may be done in perfect good faith, for, he, in turn, may have sold to his constituents on the original samples, but finds the goods are not suitable for his trade either on account of leaf, or liquor not having been matched.

In the event of such rejection a great deal of cross correspondence ensues. The tea may have been paid for on letter of credit. The merchant rejecting it, has to notify the local agent who, in turn, notifies his principal in Calcutta or Colombo. Bills have then to be drawn on the shipper. and there is a delay of from two to three months before matters are adjusted. Or the tea may have been shipped and the documents drawn against. The bills have to be accepted by the merchant who ordered the tea, purely as a matter of courtesy, and bills drawn against the shipper.

In the case of the shipment being taken over subject to revelation and an allowance made, the same tedious process has to be gone through. The merchant buying on mail samples feels he is running risks as he is not buying on actual samples drawn from the chests as he would do if the tea was on the spot, or where he a buyer in London, Calcutta or Colombo. The gist of this trouble is that it is apparently impossible to rely upon teas ordered on samples being matched.

This trouble will exist so long as no provision is made for blending teas in the Eastern markets. Until then there is no guarantee that samples will be accurately matched, and the trade is carried on practically upon the local agents' good character and reliance upon his good faith.

In some cases the buyer of a house refuses to buy on samples, and will only go so far as to order teas on approval. Such orders are at the risk of the local agents, and he in turn has to rely upon the Calcutta buyer, following his instructions as to selections of tea. In filling the order the same difficulty occurs in obtaining long lines, and the shipment is composed of several breaks bought at different prices averaging the limit imposed. The buyer here may select the teas which brought the highest price, and the balance on sale in the open market may lose the sipper the entire margin of profit which would have been obtained, had the whole line sold at the average expected.

All in this class of business are of opinion that it would be better in cases where tea cannot be matched absolutely, or where only a portion of an order can be filled to match the standard, that that portion only be shipped, or the order left unexecuted, rather than that byers here should be subjected to the trouble and annoyance of dealing with teas they do not want, and have not ordered.

WELL DONE MATALE: 1,066 LB. OF MADE TEA PER ACRE.

SIR,—I last year reported to you a crop of 993 lb. made tea per acre from this estate for 1896. For 1897 I realized from a total bearing acreage of 204¾ acres, a crop of 218,290 lb. made tea, equal to a yield of 1,066 lb. made tea per acre. This has been realized without manure and by medium plucking. I manured some 25 acres in October, but no result has shown itself to date. Also I may say that some fields were "off" flushing, having run to leaf owing to my not having been able to prune them, otherwise crop might have been larger.

I believe that several Matale Valley estates can run my figures very close, too.—I am, &c.,

H. STOREY.

Warakamure Estate, Matale, Jan. 12th.

THE BAMBARABOTUWA DISTRICT—AND CORRECTIONS.

Ratnapura, Jan. 17.

DEAR SIR,—Some errors have crept into your leading article *re* opening of the Bambarabotuwa-Ratnapura districts.

Hopewell estate is 40 miles from Ratnapura: if you go via Balangoda outlet, but only 23 by cart road now being constructed via Hapugastenne it joins in, or branches off at Vewalkettiya.

Government did not give three acres heavy forest for one, *but three acres chena* mixed with bothersome native holdings per acre of jungle.

Hopewell factory is intended to turn out 1,250,000 or 1¼ not 2¼ million lb.—Yours faithfully,

JAMES GRAY.

[The correspondent who distinctly wrote 2¼ million to us, should be metaphorically "hanged."—ED. *T.A.*]

COFFEE AND CONSPIRACIES IN BRAZIL.

After a considerable interval we have received an interesting, chatty letter—see page 547—from Mr. A. Scott Blacklaw, so long resident in Brazil, although he began life as a Ceylon planter. His introduction gives us a very graphic account of the curious disturbance in the State of Bahia—dignified with the name of "Revolution" through the persistent way in which the Government police and troops sent against the "rebels" home or stockade, got defeated over and over again. Mr. Blacklaw winds up too with a tragedy in the attempted assassination of the President and actual murder of the Minister at War. But in between comes the practical part of the letter in which our correspondent has to tell us about "coffee" in the great South American State. We should have wished to learn more particularly of the condition and prospects of the Dumont Company's properties in which so many leading Ceylon men are interested; but we learn instead the general prospects, and certainly these do not indicate any cessation to the extension of coffee planting in Brazil, cheap though the produce has lately been. If the Brazil authorities really sold their State Railways and established a stable Currency, a new era of prosperity might be ex pected for their very rich country.

PRODUCE AND PLANTING.

BRAZILIAN RUBBER.—The British Consuls at Para aud Manaos give in their official reports some interesting particulars regarding the rubber industry. Mr. Churchill, who is stationed at Para, says, in regard to the question of buying rubber forests, that he gathers from those engaged in the trade that it would be possible to buy forests, aud probably whole islands, producing the best rubber, but excessive prices would have to be paid, as rubber is the chief industry at Para, and yields comparatively large profits to the greater part of the population It is believed that it would be quite impossible to compete successfully with Brazilian and Portuguese forest-owners, who exploit their estates in the most economical manner, and can stand the climate, which is deadly to Northern Europeans. It appears that the trade is practically in the hands of a class of traders called aviadores, who establish themselves at various points on the Amazon, and advance food and other requirements to the collectors of rubber, and in exchange they receive all the rubber collected, which they send down the river for sale at Manaos or Para. Through the credit system the aviador makes the collectors of rubber permanently in his death. He is enabled to accomplish this all the more as the rubber districts do not produce any foodstuffs, aud all payments for rubber are made in kind. It is said that it is not customary to buy forests, as they are worthless to the owner unless he can get the produce, and he certainly does not get it unless he lives on the spot and acts in the same way as the aviador. This would appear simple, but, so far as Europeans are concerned, it appears to be rendered impossible by the climate. There is no doubt that the climate most suitable for rubber is the least suitable for human beings, especially white ones. But given reasonable comforts, and proper food, which it is possible to have on the banks of the Amazon, a Britisher, with proper organisation, might perhaps stand the much-dreaded climate. The best means of working a large rubber business would probably be to employ a large number of aviadores, and to make their centre at Manaos.

PLANTING IN BRITISH CENTRAL AFRICA.—Up to the present the exportation of coffee to Europe from the Nyasaland Protectorate has been little more than an experiment. There was no question about the high quality of the berry there produced; all experts pronounced it to be quite of the old Mocha standard. But before going farther with the venture it was essential to ascertain whether transport charges would not swallow up all profits. The voice of the pessimist uttered that dismal prophecy freely enough, while the doleful Little Englander refused to believe that any good could come out of British Central Africa. Remembering these mournful predictions, it is pleasant to learn that the planters are entirely satisfied with the financial results of their plucky experiment. A greatly extended area has been brought under cultivation, aud the time seems not far distant when the Proctectorate will become a dangerous rival to Brazil in the European market. The planters also look forward to the time when the Zambesi branch of the Bechuanaland Railway will bring Nyasaland into touch with British South Africa. That is no longer a dream, but, thanks to Mr. Rhodes, on the way to become a realised fact at a comparatively early date. Tea of high quality is also produced in the Protectorate; indeed, so rich is the soil and so propitious the climate that it is very difficult to say what crops could not be cultivated. There is, too, an abundant supply of very cheap labour, and although newcomers are apt to pick up fevers before they become acclimatised, the old Scotch planters aud missionaries are said to enjoy excellent health. When the Zambesi branch of the Bechuanaland Railway is completed there seems to be no reason why planters should not supply Mincing lane with both tea and coffee.—*H. and C. Mail*, Dec. 31.

GOW, WILSON & STANTON'S INDIAN AND CEYLON TEA SHARE REPORT.

London, E.C., Dec. 31.

It is only during the last few years that investments in Tea Producing Companies have heen extensively made by the public. Until lately, they were looked upon as difficult of sale, an opinion which was certainly correct some years back, but is far from being so at the present time. Shares have lately become so widely distributed that their marketability has considerably increased.

The past year has been noticeable for its increasing number of comparatively small investments, rather than large amounts; and for the distribution of Tea Shares over a more extensive area.

Tea production was carried on under greater drawbacks than during the past two or three years. In the first place, Exchange ruled at a higher average. This enhanced cost of production, which was further raised by the high price of rice, owing to the recent famine in India; the average price was also somewhat below that of last year, while the earthquake in India has also, either directly or indirectly, affected several Indian Companies.

The average price of all Indian Teas sold in London since commencement of season was 8·99, against 9·13d same period 1896.

The average price of all Ceylon Teas sold in London during 1897 was 7·71, against 8·21d same period 1896.

It may therefore be doubted whether the result of cultivation will be as satisfactory as during the two previous seasons; still many of the best Companics should be making fair profits, although such as have not accumulated a solid reserve, may, and in some instances have to, distribute less in dividend.

The growth in consumption was larger than in production, new markets, as well as the home trade, having shown a substantial advance.

There appears, therefore, no likelihood of immediate over-production, while the fact that India and Ceylon together subscribe some £18,000 per annum for the purpose of fostering the use of their Teas in new markets, is sufficient evidence that Planters are on the alert to prevent actual danger menacing the Industry, through lack of energy or forethought upon their part.

Regarding the question of Exchange. as long as the Indian Coinage Act remains as at present, Exchange cannot rise much over 1s 4d, while many people who are intimately connected with the subject believe that the rate will be lower during the coming year; the average in 1897 was 1s 3 15-32d against 1s 2 13-32d in 1896.

Although the strong demand which has taken place in the last few years for Tea Shares caused a considerable rise in their market value, the prospects of a somewhat poor year have lately caused a reduction in quotations of many securities, and the market for the year closes lower. Several Companies were brought out during the year, the general tendency being for private owners to amalgamate different gardens together, and then form the groups into Limited Liability Companies.

Ceylon Dividends.—Ceylon L. & P., a final 7½ per cent Ord., 3 per cent Pref. and a Bonus of 5 per cent on Ord.; Dimbula Valley, 2nd Int., 2½ per cent Ord.; Mayfield, Int. of 3 per cent Pref.

THE DIMBULA TEA ESTIMATE.

The following is a copy of the full return laid on the table at the recent annual meeting of the Dimbula Planters' Association:—

1897—Tea estimate 19,323,510 lb.

	Acres.
Tea in bearing	41,232½
Native	2,826½
Total	45,059
Cultivated, but not tea ..	416
Total cultivated	45,475
Uncultivated	9,522
Total acreage ..	52,997

Average yield per net acreage 457 lb,
„ gross „ 437

TEA AND COFFEE TRUST.

Any one who looks into the dates and periods of the formation of the various financial trust companies cannot but observe how invariably they have been promoted just when prices are at the top of the wave. It may be true to say that this must necessarily be the case inasmuch as investors are forced into subscribing for their Preferred or Deferred Stocks by cheap money. As cheap money also means high prices, the natural consequence is that the directors of the Trust Company either buy in at about the highest average of the year or they unconsciously become the recipients of unmarketable and bad securities.

The last boom in Financial Trust Companies corresponded roughly with the last boom in Argentines. We should like to see, just as a matter of curiosity, how many purchases of Buenos Ayres Great Southern or of Central Argentine Railway Ordinary Stocks were made at prices of 190 and over, and how many were made a few years later, when these quotations had sunk to 95 and 50 respectively. When these railways were up at the former level of value, the Trust Companies were coming out week after week, and had hundreds of thousands of pounds to lay out. When the same Railway Stocks were in the mud the same Trust Companies had neither the funds nor the faith to buy a single thousand Steck.

At the present time a great boon would be bestowed upon investors if a highly reputed Financial Trust Company could be formed for the purchase of tea and coffee shares, thus spreading a million or so of money among the shares both of well-known Indian and Ceylon tea gardens, and also among home trading concerns which sell tea retail and which pay handsome dividends. Sooner or later the far-off cry for a free breakfast-table will make itself heard in Parliament, and the consumption of tea will be increased by 50 per cent within the following three years.

There are many Indian and Ceylon tea shares as well as tea shares in the industrial market over here which can be bought to yield from 5 to 7 per cent upon money invested. If a sum of £10,000 were divided among a score of such companies, no one can say that it would not be far more safely invested than if sunk in any one company. Instead of £10,000 a sum of £3,000,000 could easily be outlaid, and a new company with a capital of £1,000,000 in Three-and-a Half per cent Debentures, £1,000,000 in Four per cent Preference, and £1,000,000 in Deferred, would receive immediate support.—*Echo*, Dec. 28.

HAPUTALE DISTRICT IN 1897.

Weather.—Rainfall about 45 to 50 inches above the usual average!

Crop.—Latter half of the year, bad flushing weather, most estates short of estimates. Coffee crop little or nothing.

Labour.—Fairly plentiful.

Roads.—As there is a great saving of upkeep on the road all below Haldummulla, Government might allow the four miles, say from Kalupahana estate turn-off, to Haputale, to be repaired twice in the year. Once is not sufficient with all the heavy up-traffic it gets now, which it never did before the railway was opened.

Grievances.—No Telegraph station yet at Haldummulla, no siding at Idulgashena gap, where there should have been a Railway Station, according to original estimates. The line was made level on this spot for a station, and everything is ready for it. Natives would buy up the Government land on both sides the line very readily for boutiques. But nothing is done

PLANTING NOTES.

Avoiding a Thunderstorm.—On the approach of a thunderstorm French peasants often make up a very smoky fire, says *Industries and Iron*, in the belief that safety from lightning is thus assured. By some this is deemed a superstition, but Schuster shows that the custom is based on reason, inasmuch as the smoke acts as a good conductor for carrying away the electricity slowly and safely. He points out that in 1,000 cases of damage by lightning 6·3 churches and 8·5 mills have been struck, while the number of factory chimneys has only been 0·3.

Prices of Plumbago.—A merchant calls attention to a remark in our review of the year's exports which ran as follows:—

The exports of Plumbago have been fairly satisfactory and so have prices; but higher prices have ruled before now, and if there be a reversion to them, there is no reason to suppose that we shall not be able to send away more than the 357,257 cwt. we did last year.

Our correspondent adds:—"I don't think prices ever came within 25 per cent of these ruling as last year closed and this year opened." We stand corrected: we certainly thought that in the "sixties" or "seventies" prices were higher than in 1897; but we had not time to refer. We are glad to note maximum prices for our one mineral of commercial importance, and feel sure that they must lead to a development of the mining industry. Indeed Capt. Tregay's "mission" is primarily connected with plumbago. Would that the Government Geologist from India made his appearance and began the Survey. Although no one has suggested it that we have seen, it is just possible, we suppose, that plumbago veins may run through the country North of Kurunegala, about which we can get no encouragement from a planting or agricultural point of view.

THE LAST QUARTERLY SALES OF CINNAMON.

The particulars we lately published of the quarterly sales of Ceylon Cinnamon held in London on 29th November, exhibit a very large and varied catalogue. The quantity brought to the hammer was no less than 3,090 bales, against 1,298 at the previous quarterly sale, and against 1,400 bales at the corresponding sale of 1896. Notwithstanding that more than double the quantity which we offered at previous sales was catalogued, and perhaps the largest quantity ever brought forward at one sale, the competition was brisk, and about three-fourths of the offerings were disposed of. Naturally, the prices were rather irregular, as buyers would hold back to see whether the demand was at all commensurate with the immense supply; but the prices at which most of the lots were cleared, make the disposal of 2,350 bales a very satisfactory feature of the sale. At most there was a drop of a penny a lb. for ordinary sorts, which had the drawback, in the eyes of the London monopolists, of being "unworked"—that is, in the opinion of local shippers, of not having contributed to the exorbitant charges of Warehousemen for undoing and re-doing (badly) the baling and sorting which had been already well done here; while the better sorts of cinnamon and those which had been "worked" fetched higher prices than in August. Indeed, the competition for the best brands was keener than it had been for almost a score of years, and quite recalled "old times." Thus A. S. G. P. (Golua Pokuna), F. S. W. S. and F. S. K. (Wester Seaton and Kimbulapitiya, whose industrious head Frederick Schrader, joined the majority last year) and J. D. S. R. (Rajepakse Mudaliyar's brand) were well competed for and held their own at prices ranging from 1s 3d to 1s 7d for Firsts, and 11d to 1s 3d for Fourths; but the "record" was marked when Golua Pokuna fetched 2s 4d for a lot of six bales of its Firsts. Of course, this was a fancy price, and may not again be realized for years; but the competition which led to such a price shows, both that the old mark still heads the list under Mr. Gerald Nicholas's careful supervision, and that cinnamon is attracting more attention than it has done for years. "Unworked" cinnamon, which is not graded so carefully, realised from 7d. up to 1s. 1d. per lb., which, we fancy, is scarcely less than the price which "worked" cinnamon of the same class fetched. Anyway, of 2,500 bales of "unworked,' including large quantities of the De Soyza marks, 1,800 bales were sold at auction.

Altogether, the results of the last sales justify our confidence in the future of the Spice, as expressed in our Review of last year's Exports; and if too much is not thrown on the market at a time, the demand promises to ensure a maintenance of the prices which have ruled for the last three or four years, and given satisfaction to proprietors.

The following is the Report of a leading Firm in the Spice trade on the last Sales:—

London, Dec. 2nd, 1897.

At the closing auctions of this year, held on 29th November, the large supply of 3,090 Bales, Ceylon offered, against 1,289 Bales in the August sales, and 1,400 Bales at this period last year. Notwithstanding the large supply, there was a good demand resulting in about 2,350 bales being cleared. Prices, however, ruled irregular, but on the whole Ordinary and Fair sorts must be quoted about 1d per lb lower, while the upper grades of fine and superior "worked" well-known brands were well competed for at advanced prices, some of the finest realising fancy prices far above the regular values. These extreme prices were entirely due to the spirited competition of two of the principal buyers to secure the fine lots, such as A,S.G.P., F.S.W.S., F.S.K., and J.D.S.R.; and they cannot be looked upon as any guide to values at the next sales. "Worked" sold, First sort, fair to good 11d to 1s; fine to superior 1s 3d to 1s 7d with one lot at 2s 4d; second, medium to fair, 10d to 11d; fine to superior 1s 2d to 1s 7d; thirds ordinary to good 9d to 10½d; fine to superior 1s to 1s 5d; Fourths ordinary to fair 8 ½d to 9½d; fine to superior 11d to 1s 3d per lb. Of the 2,550 Bales "unworked" cinnamon offered, some 1,800 Bales were cleared at prices ranging from 7d up to 1s 1d per lb, for ordinary to good.

Chips &c. Of 1,030 bags on sale, about 250 sold, ordinary to good 3d to 3½d; Quillings &c. 9d to 11½d per lb.

Stocks of Ceylon 4,384 Bales; against, in 1896—2,100 Bales, 1895—5,679; 1894—4,087.

The next Sales are fixed for 28th February 1898.

Forbes, Forbes & Co., Limited.

THE CEYLON "THIRTY (TEA) COMMITTEE."

Minutes of proceedings of a meeting of the "Thirty Committee" held at Kandy on Saturday the 15th day of January 1898 at half-past seven o'clock (7-30 a.m.) in the morning. Present:—Hon. Mr. J. N. Campbell (Chairman), Messrs. A. Philip (Secretary), W. Henry Figg, James G. E. Ryan, Edward Rosling, A. Melville White, Edgar Turner, J. H. Starey, Joseph Fraser, F. G. A. Lane, R. A. Galton, Oliver Collett and Gordon Pyper. The notice calling the meeting was read. The minutes of proceedings of a meeting of the "Thirty Committee" held at Kandy on Saturday, the 13th day of November, 1897, were submitted for confirmation. Resolved:—"That they be and they hereby are confirmed."

Finances.—Submitted letter from the Treasurer of the Colony.

Read letters from the Manager National Bank of India Limited.

Minutes.—Read letter from Government acknowledging receipt of copy of the minutes of proceedings of a meeting of the "Thirty Committee" held at Kandy on the 11th September and confirmed at a meeting held on the 13th November 1897.

Governor in Executive Council.—Read letter from Government intimating that the Governor has been pleased with the advice of the Executive Council to approve of the proposed expenditure of £200 sterling in advertising Ceylon tea in Austria and Hungary.

Representative in America.—Read letter from Mr. Wm. Mackenzie to the Secretary dated New York 7th November, 1897. Read letters from Mr. Wm. Mackenzie dated New York 1st November, 2nd November, 9th November, 16th November, 19th November, 1st December, 24th December to Mr. Campbell with enclosures. Resolved (I):—"That the memo forwarded by Mr. Mackenzie for the benefit of Colombo shippers showing the difficulties which arise when teas are shipped different from the samples be published." Resolved (II):—"That the thanks of the 'Thirty Committee' be conveyed to Mr. Blechynden for his successful efforts in connection with the American legislation regarding the 'sieve' test for teas imported into the United States of America." Resolved (III):—"That the credit for £4,000 sterling favouring Mr. Wm. Mackenzie and wired to London the 8th January 1898 be confirmed." Resolved (IV):—"That the question of placing a certain amount of the 'Tea Fund' in fixed deposit be left for consideration in the hands of the Chairman and Secretary." Resolved (V):—That an approximate statement of the amount at credit of the Fund and of the appropriations voted by the 'Thirty Committee' be placed on the table at the meetings of the Committee with a view to show the funds available.

Read letter from Mr. J. D. Quinn. Resolved :—"That the Secretary's letter in acknowledgement be confirmed and that Mr. Guinn be referred to Mr. Wm. Mackenzie."

Read letter from Mr. F. A. Pappe. Resolved :—"That the Secretary's letter in acknowledgement be confirmed."

Read letter from Mr. Fred. W. Bois. Read letter from the Ceylon Association in London forwarding copy of correspondence with the Secretary of Her Majesty's Customs in regard to tea rejected by the American Customs as to which Mr. Mackenzie sent advice. Resolved "That the letter be published."

CEYLON TEA IN RUSSIA.—Read letter from Mr. M. Rogivue. Resolved :—"That the letter be published." Read letter from Messrs. Peek Brothers and Winch Limited. Read letter from Mr. J. M. Maitland Kirwan. Read letter from Messrs. A. F. Vagd & Co. Resolved :—"That the Secretary's letter in acknowledging be confirmed and that in further reply it be stated that the Committee will be glad to receive any information or letters from them for guidance."

CEYLON TEA IN THE CONTINENT OF EUROPE.—Read letters from Mr. R. V. Webster dated Stockholm, Sweden 24th October, St. Petersburg, 31st October, Moscow 2nd November, Buda-Pesth, Hungaria 12th December, Syracuas, Sicily, 24th December 1897, reporting on the work done by him in advertising Ceylon tea on the Continent of Europe in terms of the minute and resolution passed by the Thirty Committee at a meeting held on the 16th of January 1897.

CEYLON TEA IN AUSTRIA AND HUNGARY.—Read letters from Mr. G. A. Marinitsch, Colombo with reference to the free distribution of Ceylon tea through the press or otherwise under the resolution of the Committee passed on the 13th November 1897.—Resolved :—"That Mr. Marinitsch be asked to confer with Messrs. Renton and Ryan in whose hands the arrangement of the whole matter is left by the Committee. Read letter from the Imperial and Royal Austro-Hungarian Consul at Colombo stating with reference to the contemplated presentation of Ceylon tea to His Imperial and Royal Majesty the Emperor Franz Josef on the occasion of the Jubilee of His Reign that the intention will be conveyed to the Lord High Steward of His Imperial and Royal Household.

Read letters from Messrs. J. H. Renton and J. P. Ryan.

Read letters from the Ceylon Tea Company Limited, Colombo, transmitting invoice for a 1,000 lb Ceylon tea in 800 one ounce packets shipped to the Anglo-Colonial Import Association Buda-Pesth, Hungary in terms of minute and resolutions passed by the Committee on the 10th July 1897. Resolved :—"That the approval of the Governor in Executive Council be obtained to this appropriation.

Read letter from the Agents Ceylon Tea Company, Limited, Colombo with Invoice for 500 lb. Ceylon Tea delivered to Messrs. Darley Butler & Co., for distribution in Austria and Hungary on behalf of a correspondent in Vienna under minute and Resolution passed by the Committee on the 13th March, 1897.

Read letters from Messrs. Cooper Cooper and Co., Limited, London.

CEYLON TEA IN BELGIUM :—Read letter from Messrs. Cooper Cooper and Company Limited on the subject of pushing and advertising Ceylon Tea in Belgium. Resolved :—"That £200 sterling be granted to Messrs. Cooper Cooper and Company, Limited for advertising Ceylon Tea in Belgium. (2) That Messrs. Cooper Cooper and Company, Limited be requested to furnish the Committee with a formal report of progress for publication from time to time. (3) That Messrs. Cooper Cooper and Company, Limited be asked to consider the grant made on condition that Ceylon Teas only are advertised and pushed. (4) That the sanction of the Governor in Executive Council be obtained to the above mentioned appropriation."

CEYLON TEA IN SWEDEN :—Read letters from Messrs. Cooper Cooper and Company, Limited in reference to advertising Ceylon Tea in Sweden. Resolved :—"That a sum of £40 sterling be granted to Messrs. Cooper Cooper and Company, Limited, for advertising Ceylon Tea in Sweden and that they be informed that in future application should be made to the Thirty Committee and sanction obtained before expenditure has been incurred by Messrs. Cooper, Cooper and Company, Limited on behalf of the Committee (2) that the sanction of the Governor in Executive Council be obtained to this appropriation.

CEYLON TEA IN FRANCE AND SWITZERLAND.—Read letters from Messrs. Peek Brothers and Winch, Limited on the subject of pushing Ceylon Tea in France and Switzerland. Resolved that the Chairman do communicate with the Agent at Colombo of Messrs. Peek Brothers and Winch, Limited on the subject and that meantime consideration of the matter be deferred.

CEYLON TEA IN NORWAY.—Read letter forwarding Report from Mr. C. Floor on the progress made in pushing Ceylon Tea in Norway. Resolved that the Chairman be asked to deal with the matter.

CEYLON TEA IN SOUTH AFRICA.—Read letter from Messrs. Murdoch and Branwell asking for a grant for pushing and advertising Ceylon Tea in the South African Republic. Resolved that the Thirty Committee do grant to Messrs. Murdoch and Branwell, a sum of £200 sterling for the purpose of advertising Ceylon Tea in South Africa on condition that they or their constituents spend a further sum of £400 sterling in such advertising of Ceylon Tea in South Africa (2) that reports and accounts be submitted from time to time for the information of the Thirty Committee.

CEYLON TEA IN BURMA.—Read letter from Mr. C. G. Jansz. Resolved that the Committee regrets that they are unable to entertain the application. The Thirty Committee then adjourned. A. PHILIP.

Secretary to the Thirty Committee

(QUININE) CINCHONA BARK.

Messrs. S. Figgis & Co.'s Review, for the year 1897, is worthy of attention :—

This year has been eventful in the great rise in value compared with 1896. The excessive shipments from Java appear to have reached their maximum, after the very rapid growth of the previous fifteen years, and the same causes as have led to the almost exhaustion of many Cinchona plantations in Ceylon, whence we received as much as 12 million lb. 10 years ago, against 1 million this year, induce many to think that Java will decrease her production for some years. Whatever the causes may be, the Java shipments are only 8¾ million lb. against 10½ million lb. last year. Ceylon has not increased her supply, nor India to any extent, and South America has not recommenced, and Bolivia sent but trifles (mostly for Druggists' purposes.) Coupled with a falling off of 15 per cent. in supply of bark as compared with an average of the last five years, there has been an extraordinary demand for quinine, all the factories of the world having been fully occupied during 1897 and the old stocks of former years' speculation nearly exhausted in America, and reduced by one-half in Europe. Doubtless the unprecedented low price of quinine last February induced many dealers all over the world to buy freely, but today's stocks of quinine and of bark are very moderate, and probably not two-thirds of stocks at same period of the last ten years. We are of opinion that the very low price for bark, ⅝d (2.12 cent.) per unit, was totally unremunerative to growers, and that in consequence many estates have rooted up the trees; Succirubra plantations we know have largely decreased, and the active demand and enormous price paid for this Bark and for Cinchonidine, 8½d per ounce recently, is the natural consequence. It must be remembered that it takes 7 or 8 years for newly planted trees to yield appreciably. Therefore we expect that, unless we have a renewal of the very large shipments from Java and elsewhere, we may see a higher range of prices for some years. Our tables of figures of supply, price, contents, &c., shew the enormous quantity that has gone into consumption, and if this has been so with excessive old stocks of quinine, we see no valid

reason to expect a less consumption in future. Indeed, the so-called "opening up" of China, Corea and the East must tend to enlarge the demand, and America has steadily advanced her requirements of late years.

January to November.	Stock December 31st. Packages. In Amsterdam.	In London.
1897	12,000	16,000
1896	17,040	22,190
1895	16,147	27,450
1894	24,635	32,066
1893	14,184	37,841

	Price of unit at close of year. London.	Amsterdam.	Average price of unit for year. London.	Amsterdam.
1897	$1\frac{1}{4}$d	7 cents.	1d	4.70 cents.
1896	$\frac{1}{2}$d	2.25 ,,	$\frac{5}{8}$d	2.67 ,,
1895	$\frac{5}{8}$d	3 ,,	$\frac{5}{8}$d	2.79 ,,
1894	$\frac{1}{2}$d	2.80 ,,	13-16d	3.95 ,,
1893	13-16d	3.86 ,,	$\frac{7}{8}$d	4.28 ,,

Stock of quinine in London 31st December, 1897 $1\frac{1}{2}$, 1896, $1\frac{1}{2}$, 1895 2, 1894 $2\frac{3}{4}$ million ounces.

PROPOSED ALTERATION OF COFFEE SALE RULES.

A largely attended meeting of the coffee trade was held last week at the London Commercial Sale Rooms, Mincing Lane, E.C., "to consider the advisability of altering the rule governing the conditions as to size and sale of lots offered in public sale." Mr. Melville Woodhouse was voted to the chair, and said the meeting had been called together to see whether some means could not be devised for facilitating and expediting the sale of coffee. If it could be done without in any way interfering with business they would all be glad, but personally he did not see how it could be done. He would, however, venture to make one suggestion, viz., that they should endeavour to be a little more punctual in the coffee trade.

Mr. G. W. Rouse said he received the following letter, which explained why the meeting had been called:—"To the committee of the coffee trade.—Gentlemen, we, the undersigned firms, have come to the conclusion that the regulations now observed in public sales no longer meet present requirements, and that they prevent an important and large section of the trade from attending to their business properly. It is a fact that the sale of the considerable quantity of small lots absorbs an abnormally long time. Single bags are continually put in at 20s, 30s, and 40s under their value, and it often takes longer to sell a single bag than piles of 500 bags. Sales are consequently dragged out, and the disposal of important quantities of coffee and the proper working of those sold are prevented through want of time. Besides such a tedious werking is demoralising to those interested in important parcels, and not worthy of a great market. We therefore think it would be advisable to dispose of all lots of less than fifteen bags after the larger quantities have been sold, in fact, to bring them under the category of the so-called 'odd lots,' all quantities of less than fifteen bags, irrespective of quality and condition, to be considered odd lots. This arrangement would not inflict hardship on anybody—in fact, it would, we believe, have the opposite effect. It would enable importers to make the desired progress with the important part of their consignments, which is now continually interfered with; it would enable the larger buyers to attend the public sales personally and to work their purchases as required, thus indirectly benefiting importers; and it would not make greater claims on those interested in the purchase of small lots, and on the selling and buying brokers. We may add that the tea trade have successfully adopted a similar regulation. We recommend these our proposals to your careful and prompt attention, (Signed) Lansburg & Co., R. Wales (Moffatt & Co., Khun & Co., C. Buek & Co., E. Schluter & Co., F. Huth & Co., Mr. R. Meyer & Co., Krauss and Graeff." Continuing, Mr. Rouse said that, according to the invitation in the letter, the committee which consisted of buying and selling brokers, was called together, and they unanimously came to the conclusion that the question bristled with momentous difficulties to the importers, and especially those who shipped fine coffees, and also to the home trade. Accordingly the committee came to the conclusion that they did not see their way to recommend any alteration in the present system. They felt certain that their friends who proposed the change did not mean to do any injustice to the importers, and did not contemplate that their suggestion would have that effect. The committee, therefore, acting on the saying that "in a multitude of counsellors there is wisdom," had thought it better to call a meeting of the entire trade, so that the whole question might be discussed and definitely settled.

Mr. Schwartz (F. Huth & Co.), in proposing a resolution for the adoption of the change suggested in the letter, said that he and his friends wished to do the best for the market as a whole. The principal points of complaint and the remedies proposed had been embodied in the letter, and he hoped the trade would agree to the proposals they put forward. During the last few years, particularly since their trade with Columbia had developed, an enormous quantity of small lots had been put upon the market, and it had been felt by important sections of the trade that the sale of those small lots absorbed too much of their time, and made it impossible to conduct their business properly. He did not mean to argue that no attention should be paid to these small lots—on the contrary all due care should be paid them, but the large quantities should have the same chance as the small lots, and that was not the case at present. Nobody could dispute that it took longer to dispose of twenty lots of two or three bags each, than it did to dispose of a hundred large parcels. The alterations proposed would, he believed, get over the evil, and benefit all sections of the trade. It was the duty of every trade to arrange their methods of business so that no harm should be imposed on anybody, and that he believed would be effected if the suggestion made were carried out. It could not possibly interfere with anybody if small lots were to be sold afterwards, and under such an arrangement he considered the importers should benefit equally with the brokers.

Mr. Lansberg said that before any discussion took place he would like to suggest that a small committee be appointed to deal with the matter, and report to another meeting. It was obvious that there were many differences of opinion on the question, which could not very well be dealt with at a large meeting. Let a committee be appointed to discuss the pros and cons of the matter, and then perhaps they might be able to recommend an arrangement which might suit the trade as a whole.

Mr. R. Wales said that, as the meeting had been called to ventilate the question, he thought it would be advisable to get the views of some members of the trade before any resolution was proposed. If that were done they might be able to come to a solution of the difficulty which would be satisfactorily all round.

Mr. W. J. Thompson thought there were very grave difficulties in the way of making the alteration, as it would practically relegate the finest coffee into the odd lots.

Mr. Davis said he would move the following resolution: "That this meeting is of opinian that the suggested change in the odd lots rule is not desirable." He said he had taken the trouble to glance at last spring's catalogue, and if the suggested rule had been in force at least 80 per cent of the boldest size East Indian coffees, and 90 per cent of the peaberrys would have been relegated to the odd lots. Could anybody conceive a more manifest injustice to the importers than that—that the very finest parcels of coffee that came to this country should be treated as odd lots? He did not believe for an instant that

the room would tolerate such a proposal. The existing rule had worked to the general satisfaction of the trade, and had stood the test of many years' practical experience, and had proved a satisfactory solution of a difficult problem. It was quite possible it was not a perfect plan, but it had worked pretty well, and he thought the room had better let well alone. (Hear, hear.) He did not believe that the room would permit such a wanton act of injustice to the importers for the purpose of studying the convenience of a small section of the trade. In his opinion the fewer rules they had the better, and if rules were to be respected they must be framed in a generous spirit and found upon the goodwill of the whole trade.

Mr. Ivey seconded the resolution.

Mr. A. Devitt said, he was sure Mr. Schwartz had brought forward his proposals in the belief that they would curtail the waste of time which occurred in the coffee room sales, and which was to be deplored. If the sales were exhausting to buyer and seller, the exhaustion to the unfortunate auctioneer was even greater. Some of them had done what they could to hasten the sales, but even now some took such a time as was a disgrace and a discredit to the trade. He himself had sat in the box when a very small catalogue had taken three-quarters of an hour or fifty minutes, and a great deal of the waste of time arose from buyers of small and cheap lots not bidding up in a fair and proper way. They had coffee put up which was often started at 50 per cent less than it ultimately reached. But he did not think Mr. Schwartz's proposition would be acceptable to any of them who had to sell fine coffee, or coffee which came in small lots. Take Jamaica coffee—did the resolution include the eight, ten, and twelve barrel lots of Jamaica? Also, did it include East India in cases? Because, if they came to analyse the sales it would be seen that the rules, if altered, would bring about an extraordinary state of things. No doubt the idea was put forward with the best of intentions, but he did not think it would work, and not one of the importers would agree to it. As far as he was concerned, and his merchants, they could not agree.

Mr. Graeff proposed the following amendment to Mr. Davis's resolution:—"That all East Indian and Ceylon be excluded from the present odd-lots rule, with the exception of triage, blacks, brown, and cherry pickings." He said he believed that if his proposition were agreed to, the difficulty they all deplored would be overcome. They quite understood that importers did not want small lots of fine coffee to be sold as odd lots, and he believed it was the general opinion of the trade that they should not be so treated. (Hear, hear.)

Mr. Lansberg seconded the amendment.

Mr. Wales said he would like to see the question relegated to a small committee, who might bring up an official report, which would act as a guide to the room at a future meeting, as to whether anything, and if so what, could be done to remedy the present state of thing.

Mr. Asser also supported this view, and said he believed a representative committee might be able to devise some means for remedying the evil which would be satisfactory to everybody.

Mr. Davis said he would rather that the meeting voted one way or the other, for if his resolution was carried no committee would be necessary.

The Chairman put the amendment to the meeting, and it was negatived by thirty-eight votes to twenty-one; and Mr. Davis's resolution was carried as a substantive resolution by fifty-four votes to thirteen.

A vote of thanks to Mr. Woodhouse for presiding concluded the proceedings.—*H. & C. Mail*, Dec. 31.

THE ALLEGED FAILURE OF STRAITS COFFEE.—The heavy fall in the price of Liberian Coffee has aroused widespread alarm in the Native Straits. It is alleged that coffee-growing will not now pay there except under exceptional conditions.—*Straits paper.*

MATALE EAST DISTRICT 1897.

WEATHER.—The rainfall has been about 13 inches over the average of 20 years, well distributed throughout, and free from damaging storms with the exception of a few showers in November. The south-west was milder than usual, August and September perhaps being an exception. The north-east till December was fairly favourable.

CROP, excluding estates that are manuring, the yield generally speaking, is behind that of last year off the old area, mainly caused by more selective plucking, and three poor flushing months in the latter half of the year.

LABOUR.—Almost without exception ample for all requirements though with a tendency to a considerable increase in socalled coast advances.

TRANSPORT.—More difficulty has been experienced under this heading than in any previous year of my experience of 26 years almost entirely caused by the deplorable state the roads have got into.

ROADS.—Worse than I have ever known them and this time it has taken to get damaged bridges repaired on the Elkaduwa and Madulkella roads is a crying scandal.

RICE.—Rice throughout the whole year has been costly entailing heavy loss to estates issuing at R4 per bushel. Coolies have also suffered from the high cost of other supplies.

GRIEVANCES.—Bad roads, and an Indian tinkered, and artificial exchange.

PLANTING NTOES.

LADY-BIRDS.—We learn from the *Friend of India* that in connection with the introduction of lady-birds, into India, to combat coffee scale pests, especially green bug, and for which the Madras Government has promised to pay half the cost, the United Planters' Association of South India have voted R2,000, the Lower Pulneys Assocation have promised R4,000, and the Wynaad Association, probably amongst others, re inviting their members to subscribe.

PINE APPLES.—A prominent importer of pineapples stated a day or two ago—says the latest *Journal of Horticulture*—that it was probably safe to say that upon an average there are 10,000 pines imported into London every week throughout the year. They are coming now in enormous quantities from the Azores, which seem to have given up growing oranges and have taken to this new cultivation, for which their soil and climate seem to be admirably adapted. Pines are still too dear to be a popular luxury. The average wholesale price is said to be 3s and the retail buyer has to give 4s 6d or 5s for a good pine this Christmas. But the growing of these is rapidly extending, and there is every probability that the price will go down.

THE TIMBER TRADE.—The "Orotava," which arrived in Colombo from Australia lately brought a shipment of Jarrah the well-known West Australian ironwood, for this port. Among the samples, which arrived by the "Orotava," was one for the Public Works Department, and a report on the timber will be submitted by Mr. Davies, Factory Engineer. A special virtue of the timber consists in its immunity from the ravages of the *Teredo*, a worm which exists in salt water and which destroys more wood in its time perhaps than any other insect in existence. A representative of one of our morning contemporaries found Mr. Bostock a great believer in the potentialities of the Jarrah—as was also his predecessor Mr. Kyle. We have in hand an interesting paper about our local hard woods.

BRITISH NORTH BORNEO.

(*Herald*, January 1.)

It will be news to most people that Ceara rubber trees are indigenous to Sandakan. A tree in large bearing of seeds is to be seen any day on the Cemetery Road. As however the yield in Comparison with *Hevea* is so small it has not yet attracted the attention of intending rubber planters.

We have received a communication from a London firm stating that a specimen of pineapple fibre extracted locally is pronounced to be of very good quality and likely to meet with a large demand if shipped in sufficient quantities.

Mr. H. N. Ridley left Sandakan for Singapore on the 21st December. During his stay here he was able to make some interesting observations botanical and otherwise.

Continued wet weather has much interfered with cutting hemp and rhea which, of course, require to be dried before packing. Decorticators and baling presses are being shipped from home for the Suan Lambah Plantation.

KUDAT NOTES.

The visits of the Hon. C. H. Strutt, M.P., and Count Gelocs d'Elsloo bring us again in connection with Europe. Both these gentlemen are looking very well and appear well satisfied with the present tobacco crop of the New London Borneo Tobacco Company, Limited.

Coffee prospects in Marudu Bay are excellent, and a large crop is anticipated.

The tobacco crop in 1898 will be large, and of very good quality. The Dusuns, this season, have been earning up to 60 cents per diem, at picking and tringing ripe leaves.

IVORY AND RUBBER IN THE CONGO STATE.

Writing from St. Paul de Loanda, British Consul W. Clayton Pickersgill says there are only two products of the Upper Congo, as far as its resources are known at present, which are valuable enough to pay the cost of transport. These are ivory and india-rubber, both of them, unfortunately, limited in quantity and slow of growth. It is a mistake, however, to regard tho exhaustion of either as inevitable. Of the forty tons, more or less, of ivory now being shipped from the Congou monthly, very little is fresh. Comparatively few elephants are being killed, and it lies within the power of the commissaries of districts to declare hunting illegal whenever they have reason to believe that the animals are in danger of being exterminated. No law, of course, can entirely control the native in the wilds, but the State is feared enough to make prohibition serve the purpose desired, and tusks may some day become an article of regulated supply like Kimberley diamonds. In the meantime, there is sufficient indiarubber in the forest of the Haut Congo to yield rich harvests for many a year, even at a much greater rate of exportation than the present, which has attained an average of 100 tons a month. And nothing could possibly repay cultivation better. Ivory may be imitated, but caoutchouc remains indispensable, the one tropical commodity of which the consumption is ever on the increase, while the sources of supply are diminishing. The preservation of the climbing plants from which the elastic juice is obtained, and the introduction of trees containing it in greater quantities, is, therefore, a labour of forethought to which too much attention cannot possibly be given. Already something has been done in this direction by a few officers of superior intelligence, but others have caused wide stretches of forest to be stripped of wealth with little regard for the needs of the future. —*Chamber of Commerce Journal.*

PLANTING NOTES.

Ceylon Tea and Exchange in 1897.—We direct attention to Messrs. Gow, Wilson & Stanton's Tea Share Report reproduced elsewhere. Written on the last day of the year, it takes the form of a review and we learn that the average for Ceylon teas sold in London in 1897 was 7·71d against 8·21d in 1896; while the average of exchange last year was 1s 3 15-32d against 1s 2 13-32d in 1896—or 1 1-16d adverse to last year. Both facts tell greatly against profits. Let us hope 1898 may do better in prices if not in exchange.

The Zanzibar Clove-crop.—Advices from Zanzibar state that all plantation-owners in Pemba report a very poor crop of cloves this year. Pemba will probably never again equal the big crops of former years. Many of the trees are getting old and woody, and only have a little foliage at the top, although, if they had been properly pruned, they might now have been in their prime. As it is, some of the shambas present the aspect of forests rather than plantations, and the trees are being used for timber. A very fine sample of Penang cloves recently received from London has been the subject of much interest both in Zanzibar and Pemba. This sample was specially selected to show what good cloves should be like when properly prepared for market. Several experiments have since been made with the object of ascertaining whether it is possible to obtain such good results in Zanzibar. Apparently it is not enough to bestow attention npon the drying only. It is necessary that the buds when they ripen shonld be picked singly, not in bunches, as is usual in Zanzibar.—*Chemist and Druggist.*

Indian and Ceylon Tea Companies.—From a review in the *Financial Times* of 4th Jan. we quote as follows:—

The total output of tea for the period is estimated for India at 151 million pounds, as against 149 millions in the previous season, while the Ceylon output is caculated at 117 million pounds, as against 108 millions, the advance in both cases being comparatively small, but especially in that of India. As regards quality, that of the Indian crop, speaking generally, was only fair, in some districts the qnality being not quite up to that of the 1896 season, while the Ceylon product was about equal to the average. A most encouraging feature of the year is the large increase in consumption, which has more than kept pace with the growth of the output, so that there can be no immediate fear of over-production. The efforts made by planters to extend the consumption of tea, for which purpose they subscribe some £18,000 annually, have met with great success. Continued progress has been made in North America, which bids fair to become soon one of the most important markets. Australia continues to increase its consumption, and the market in Russia and Continental Europe generally is steadily improving. The amalgamation of small concerns into one undertaking made further progress last year. Fifteen new Ceylon companies were formed chiefly for this purpose, and there were several reconstructions with the same object, as well as further issues of captital for extension by one or two of the older companies. It may be noted here that there is a general tendency on the part of private owners to amalgamate gardens into groups, and then to form these groups into limited companies, and there can be no question that the result generally is economy in working. With reference to the probable result to the Indian Companies of last year's working, it may be doubted whether on the whole it will be qnite so satisfactory as in the two previous periods.

Name of Company.	Rise or Fall in 1897.	Percentage of Rise or Fall per £100 Stock in 1897.
Ceylon Tea Plant. Ord.	— 1	— 10
„ „ Pref.	pls. ¼	pls. 2½

WHAT TO DO ABOUT CACAO? A HARD NUT TO CRACK.

We give prominence to the following statement of his experience, his fears and expectations by a well-known cacao planter; and we would wish to have the other side presented to us by one of the fortunate ones whose plantations are still free of any pest, or at any rate of any marked attack. At the same time, there can be no doubt of the strictures in the following paper being justly directed in regard to the Government; for, it is clear that there is room in Ceylon plantations of all kinds, for careful scientific investigation even beyond that of the Fungologist or Cryptogamist whom our authorities failed lately to provide for Cacao. What is said about the freedom on certain estates of the Forastero cacao from trouble, can only point to qualities of the soil present in one case and absent in the other. To discover these must be the work of the Chemical Analyst. In fact, we shall never be able to deal with the many questions (and troubles) which turn up in respect of the cultivation of our staple product in the lowcountry as well as on the hills, until an Analytical Chemist and Cryptogamist as well as the Honorary Entomologist, are added to the Staff of, or made available for, the Director of our Botanic Gardens.

(*Communicated by a Cacao Planter.*)

THOSE who have faith in cacao as a product which "has come to stay," base their belief pretty much on the understanding that the hardier varieties can resist the disease. I hope this is so. The havoc which has been wrought on some estates, where principally the red sorts obtained, is sickening enough, and of late, since the dry weather set in, the deaths have been so numerous, as to greatly exceed anything we have before seen. I don't know how wide the zone may be that has been stricken in this way, but you hear of it in Matale, Kurunegala, Wattegama, and the Kandy side. Well-cared-for estates, that have had every attention, suffer as much as Chetties' gardens, if not more. Cacao under shade—thick or light—is equally ravished, and trees in the open, if perhaps they suffer less, die off here and there, and weakens one's belief, that these conditions of cultivation have aught to do with the pest. If one could be but assured that the hardier varieties were disease-proof, to follow the advice to "go on supplying" with those sorts would be cheery work; for there would be hope in it; but the horrid thought will obtrude itself, that as some of the Forastero have gone already, others may follow. It has been suggested to me that perhaps there may be some deficiency in the soil—such as lime—which is favourable to the disease, and that if the missing element were supplied, the trees would have a healthier life, and be better able to resist. Perhaps some one may have tried lime and be able to speak as to its effects? Soils which were rich in manganese carried the vines successfully, while *phyloxera* was rioting where it was deficient, and it is possible that an added element to the soil might do a great work. Whatever may be said as to the duration of cacao, it is pretty clear that at present they are the older trees which are dying out. Not that I have not seen young trees three and four years old succumb; but it is more exceptional.

How useful it would have been if at this time there had been an Agricultural Department to refer to, and from which really good scientific advice might have been sought; and it cannot but strike the intelligent taxpayer as an extraordinary anomaly that the Colony—the first Crown Colony too—which depends for its revenue on agricultural sources, should be so far behind the world as to leave things to haphazard. In a case like the cacao disease, the planter who sees his estate dying out before his eyes, is not always in a position to launch out in experiments; he sees something very like disaster before him, and even if he gets his supplies to come on and do well, he has years of outlay lying ahead of him, and to conserve his capital is his wisest policy. We have, of course, the enterprising example at Matale, where a private planter imports at his own expense, and without much trouble in finding him either, a thoroughly trained Scientist to investigate, and on the other side the island's Government with all its resources, reporting that such a man could not be had. What incapacity! However, the question is, what is best to be done to replace the ravished cacao fields? Although I feel timorous to some extent, and put out my new plants with my heart at my mouth and a prayer on my lips, still I too would vote for "supplies" as the best thing I know to do. Supplementing with another product, tea, coconuts, or what you like. If the worst comes to the worst, there is this insurance policy behind as it were,—that in the event of a burst-up of cacao, although money may have been lost, some time will have been saved. Under any circumstances, the Ceylon cacao planter who has suffered or is suffering, has a hard nut to crack, and those who report their gardens free of the pest, must have uneasy feelings, and an undefined dread of the future. A few years ago to possess a cacao garden was to be a favourite of the gods, and in for a good thing: now that the shadow of eclipse is over us, let us remember those good times and live in hope.

FACTORY EXTENSIONS AND WORK.

A few weeks ago we gave an account of the work Messrs. Brown & Co., Limited, of Hatton, had on hand. To this there is not much to add, but Mr. J. Grieve, the manager at Hatton, in showing a representative of ours round the extensive Works the other day, named a few points of interest that will be new to our readers. At these Works—branches of which are now placed at Maskeliya and Norwood—there is a large quantity of local labour employed.

Messrs. Brown & Co. have in hand the remodelling of the factory at Craigie Lea, Mr. Keith is doing the brickwork himself, but the firm have in hand the iron-work and the roof. The building will be 118 feet long and 40 feet broad, and it will be supported by iron pillars. The machinery of the remodelled factory will include—two rollers, three driers, twelve horse power engine and boiler, water wheel, sifter, packer, fourteen horse power wheel.

Then the firm have in hand an aerial tramway at Warwick estate for Messrs. Finlay, Muir & Co. It is to be half-a-mile in length and to be made of half-inch rope. It connects Ambewella-road with the factory. Loads of 150 lb. in weight will be carried. It is to be worked by an independent motor and the motor is a Pelton.

It is noteworthy that in spite of a good many other makes, Soutar's Rollbreakers are still in demand, and several are in process of construction.

With regard to Oil Engines Priestman's make —the original inventor—is again coming to the

front. A heat igniter is now put on instead of the electric battery and the engines are doing better. One of the latest engines of Priestman's make is coming out to Kandapolla for use in a factory. It will be interesting to see how it compares with the old style. Priestman & Co., of Hull, were the early makers of oil engines, but their engines have in many places been superseded by other makes. They are trying to get the business back.

Messrs. Brown are also building a Withering house at Batalgalla, Dikoya: the dimensions of this are 100 feet by 40 feet, there being three flats. There are many other features of interest in the works at Hatton to notice, including a solid brass turbine of novel character; the pelton wheels, which are being used in some cases, instead of turbines; jets for condensing steam in an engine: winches for wire shoots: &c., &c. Heaps of old coffee machinery, gradually being melted down for use in other forms, are one of the points that attract the attention of a stranger.

PICKINGS.

The following is the test of a Proclamation issued by H.E. the Governor of the Cape and published in the *Government Gazette* of November 12th, 1897 :—

Whereas it is desirable to prevent the introduction into this Colony of the destructive Coffee-blight known as *Hemileia vastatrix*: Now, therefore, under and by virtue of the powers and authorities vested in me by Act No. 9 of 1876, intituled "Act to regulate the introduction into this Colony of articles or things which by reason of disease or otherwise might be injurious to the interets thereof," I do hereby proclaim, declare, and make known that I have made the Regulations set forth in the Schedule hereto for preventing the introduction into this Colony from beyond the boundaries thereof, of the articles and things specified in the said Regulations.

Any person or persons contravening any of these said Regulations shall, on conviction, be liable to a fine not exceeding £100 sterling, and in default of payment thereof shall be liable to imprisonment for any term not exceeding six months, unless such fine be sooner paid.

Schedule to the Foregoing Proclamation.—The importation into this Colony, from places beyond the boundary thereof, of any coffee plant, or of any cutting, graft, or portion thereof, is hereby absolutely prohibited; and anyone importing or introducing any such coffee plant, cutting, graft, or portion thereof, shall upon conviction be subject to the penalty provided in the body of this Proclamation, and the addition thereto the plant, cutting, graft, or portion thereof, shall forthwith be destroyed.

WATER POWER.

Under the head of "Water: the Modern Rival of Coal," Mr. J. B. C. Kershaw, in *Chambers' Journal* for January, describes the development of the modern methods for tapping the almost limitless water-power of the earth by means of first, turbines (either 'reaction' or 'impact') and secondly, dynamos. He describes the wheel pit at Niagara as planned to hold ten turbines, so that when they are all in position 50,000 horse power will be produced at one station. The impact-turbine or Pelton wheel, he says, is principally used in the mining districts of the United States, though as our readers knows they are not unknown in Ceylon. The article is a very instructive one and Mr. Kershaw points out that it is a curious fact that in Europe those countries rich in the possession of extensive coalfields—namely England, Germany, and Belgium are extremely poor in their possession of natural water power: whilst Switzerland, France, Norway and Sweden have been highly favoured by nature in the number and the magnitude of their water powers.

WILD SPORT IN CEYLON.

HUNTING THE SAMBUR.

From Mr. F. Fitzroy Dickson's paper on this subject in the January number of *Travel* we take the following extract as illustrative of the interesting manner in which the writer has dealt with his subject and also of the character of the sport he describes :—

The next day was all that we could wish, and by daybreak we found ourselves at what is known as Round Patna, some five miles from where we were camped. This was always looked upon as a good cover, but the disadvantage was that, being isolated, if the deer took it into his head, he could go clean away from us, unless we were prepared for an all-day chase, as there was no open land by which to follow him. We were prepared for this contingency, however, and had each one of us put a few biscuits in his pocket, a precaution, as events proved, that was well justified.

A little stream trickled into the Round Patna at the upper end, and flowed through a luxuriant meadow. Here we took the pack and uncoupled. We had with us two seizers, Scotch stag-hounds, and these we kept in leash. It was my luck to hold them, and the bother they gave me, getting to one side of a tree when I wanted to go another, at times made me wish them somewhere else. "Grouach" and "Borap" were their names, and they were faithfull, honest and staunch hounds as ever trod. Once uncoupled, the pack streamed all over the place, working with the keenness that characterizes a pack well handled and in good heart. Presently Marquis, a young dog of the first season, picked up a scent, which we ran down to the water's-edge and lost. Then Bugler took it up on the other side of the stream, and all at once three or four got on to it at once, and headed by old Melody, the pack were soon out of sight, having taken a bee-line up the face of the hill and into the jungle. As soon as they were over the brow of the hill we could hear nothing, and there was no help for it but to climb up after them as quickly as possible. Accordingly, up we went at a good swinging pace, and made for the highest ridge. Before reaching this, we crossed the line of the hunt, and there we saw the track of the stag.

"Men, alive!" cried W. with great glee, "he's of hoofs like auld hornie himself," and certainly the print showed that we had an old animal to deal with what would give us all we wanted and something more perhaps.

Well, we kept on that ridge running and panting and struggling for about an hour, and then found ourselves on the shoulder of one of the bighest peaks. Every now and again we could hear the distant tongue of the hounds, and we knew that we were in for it, and intended to see the game through if it took us a week. Presently we got into a nasty bit of jungle, a mixture of nillu and bamboo. Nillu, I might explain, is a jointed, succulent plant, which grows up in dense clumps, many acres in extent. There are several varieties of it, and all equally objectionable from their obstructive properties. It is easily cut with a knife, but it has the faculty of tripping you up and barring your passage. "Nillu" is the Tamil word for "Stop."

We were pretty high up now, and so worked our way across the face of the hill, but it was an awful task. We had to relieve one another at breaking the way, for such a tangle as bamboo and nillu is must be seen to be appreciated. The bamboo I speak of is, of course, not like the big cane that figures in

Japanese work. It is a trailer, not much thicker than a lead-pencil and as tough as whip-cord. It will give to any amount, but to break it is impossible, unless worked backwards and forwards like a piece of wire between the fingers. It is on this that the sambur feeds, and we always expected it.

The stag kept moving on steadily, and we had now been on the run for several hours, and began to think it was time he turned to bay. Evidently, from the way he managed things, he was a stayer. Presently we struck an elephant path one ridge that seemed to carry us in the desired direction. As it turned out, nothing could have been better, and a quarter of an hour brought us to where we could hear the hounds away below us in some stream, at bay. The seizers I hold in leash knew what was the matter and tried to get away, but the moment had not arrived for the utilisation of their services. We hurried as quickly as we could, for we knew that if we delayed too long the stag would regain his wind and then, if he started afresh, it would be all up for that day, at any rate. We soon found ourselves in a perfect forest of nillu, which for a moment threatened to utterly bar our way. Drawing my knife, I slashed viciously, whilst W., thinking he saw a clear passage, sheered off to the left. I went on chopping like a backwoodsman, crawling, jumping and advancing. All at once I discovered the stream running before me clear of obstructions. In a moment I was in it, and, running along it, came in view of the bay.

In a little recess, backed by smooth, perpendicular rocks, stood a magnificient stag, his mane bristling, his head down, ready to beat back any attack. The pack stood round him, raising a row that made the forest echo. I had at once slipped the seizers, and at the sight of them and at the sound of my voice, "Yoicks, to him!" they made a frantic rush at the stag.

At that moment W. appeared on the scene, and we advanced to the attack together. The stag was fighting for his life, and dangerous, and we knew that we could not touch him unless he was well held. In a moment there was a confused mass of dogs and deer. With gigantic springs Grouach and Borap had covered the distance between them and the stag, and had seized him cleverly by the throat. How they evaded his antlers I cannot tell, for he was as quick as lightning; but they were quicker, and the other dogs piled in on top, and W. and I with them. Another moment, and, with a mighty, convulsive leap that threw off all the dogs except Grouach, the stag fell forward dead, both our knives having gone into his heart!

It was over! There he lay, as magnificent a specimen of a sambur as ever I saw. But for the seizers we should have had a hard battle to conquer him, for he was full of fight and go. Had we left him much longer he would probably have broken bay and got off altogether. As it was, however, we shouted like a couple of school-boys, and the hours of toil we had endured seemed but minutes, and the fatigue all disappeared when we looked upon this splendid beast lying there. Presently we were joined by the rest of our party in various stages of exhaustion and dilapidation, but all revived at the sight of our success. We sat down on the mossy bank and pulling out such grub as we had brought with us, ate it and washed it down with the cold water of the stream, tempered, I might add, with a few drops of Scotch whiskey from a flask that somebody carried. We all drank, and then we gave the dog-boy a nip, for he would have to come back the next day with coolies and carry the stag home.

CEYLON LIMITED COMPANIES IN 1897:

A list of all the local "Rupee" Capital Companies incorporated during last year; and also of the Sterling Companies registered in London, was published the other day in the *Ceylon Observer*. he former number a dozen and range from the "Sinhalese Theatricals Company, Limited" with a capital of R5,000 to the Neboda, Oodoowerre, Gangawatte, Agra and Pitakande Tea Estate Companies each of the five named having a capital of R500,000. The total (nominal) capital represented in the twelve new Ceylon Companies is R3,164,000.

Turning to the Sterling Companies, we find no fewer than twenty registered, representing a total (nominal) capital of no less than £3,392,500; but this includes the Kanan Devan Hills Produce Company, Limited, which is more properly an Indian Company, and has a capital of a million pounds to itself. So again the Indian & Ceylon Tea Trust Company (capital £250,000) cannot all be credited to this island, nor perhaps the Eastern and Ceylon Tea Estates and Trading Company with its £20,000 capital. Still the list for 1897 shows substantial additions to the roll of Ceylon Plantation Companies.

The following remarks from a contemporary are of interest in connection with this subject:—

There has existed during the year a tendency to amalgamate local concerns and to issue them on a sterling basis. One such scheme has been accomplished and the results are decidedly not encouraging. We refer to the Yatiyantota, Weoya, and others. The two former were amongst the oldest of Ceylon Companies and were always pointed to as the most prosperous on the local share list, shewing 700 and 300 per cent premium respectively. These were placed on a sterling basis at near the rupee equivalent. Allowing for the issue of scrip at 50 per cent premium, the shares are now 20 per cent discount. Placing aside the cost of liquidation and reconstruction, even the most enthusiastic supporter of the scheme can scarcely look upon the venture with satisfaction. It is the popular idea that home investors are satisfied with 6 per cent. for their money—doubtless they are as a minimum, but there are contingencies to provide for. 1, Exchange; 2, Prices of produce; 3, War, famine, and disease. These are points that appeal to sound business men, who are the supporters we ought to endeavour to attract. At present we are supported by outside investors, ignorant of what they hold, and possibly first interested through advertisements and lured by the prosperity of old companies which have a splendid record, and which find a position in most prospectuses issued at home as indicative of what can be done. This class, when disappointed, air their misfortunes with persistent energy. Speaking of "decoys," perhaps the name and reputation of no Company have been of such service to promoters as those of the Ceylon Tea Plantations Company, whose splendid record has not been wasted when wanted to stimulate interest in the tea enterprise in Ceylon. The London Stock Exchange has been a weakness of some of our local financiers, but we think their affection was not reciprocated. During the boom a certain amount of interest was extended to Ceylon investments, but dealings were not a success; sales were made without finding a cover; and settlings were far from satisfactory. The capital of Companies in Ceylon was found far too small to command a ready market except on large margins, and the number of Companies entitled to a quotation was so small that it was not worth the attention required to investigate their merits. A point worth noting at the present time is that a number of local Companies are short of capital, and during the last few months this fact has been in evidence by the number of Companies making arrangements to borrow. This fact is of importance to investors who base their calculations on the usual statistics that appear in the local share lists. As an instance in point, we see in the *Gazette* that the Udabaga Coy. propose to borrow a sum of £11,000 sterling on a capital of R170,000. Considering the depressed state of the local market, and the depreciated condition of stocks representing good properties floated on the local market at prices considered reasonable by practical authorities and supported by local capital, we cannot but watch with interest the future of a num

ber of ventures recently introduced on the home market, consisting of properties at full prices and of more or less indifferent reputation. The public, we believe, are not committed to any large extent. The promoters and London Agents, as we have said before, hold the position at advantage, whilst the under-writers, though probably their "considerations" are not small, may be victims through the want of appreciation on the part of the public.

UPPER DIMBULA DISTRICT IN 1897.

Jan. 20th, 1898.

Weather Generally.—The weather during 1897 was, on the whole, favourable for tea, the rainfall being slightly over the average and very well distributed.

The Rainfall here for the season, was 102·53 falling on 231 days against an average for the last 15 years, of 98·52 and 214 rainy days.

Crop.—With few exceptions crops were very satisfactory; estates as a rule having exceeded estimates and previous yields.

Labour Supply.—Sufficient on most estates, but there are exceptions, as usual, to prove the rule.

Transport.—Foot and mouth disease caused a good deal of trouble for some time, but on the whole there has not been much to complain of.

Roads.—The cart roads, especially those converging on Talawakele, were not what MacAdam would have considered perfect, but minor roads show a marked improvement during recent years.

Rice and Other Supplies.—These have been exceedingly dear during the greater part of the year.

The slip on the railway caused considerable inconvenience to nearly all of us as most estates now deal, directly with Colombo for their food supplies, and as we do not lay in stocks except during the heavy monsoon months, almost all were on short commons and felt anxious for some time; but, thanks to the shrewd common sense of that Tipperary Scotchman, who is such an ornament and tower of strength to the Railway Department, we all worried through fairly satisfactorily.

Grievances.—These are really too numerous to mention; but low prices, high exchange, dear rice, and perverse London Brokers prevent most fellows from keeping as soundly as they'd like to.

A CEYLON TEA COMPANY PROPERLY DEFENDED

The Dimbula Valley (Ceylon) Tea Company has been the object of a good deal of criticism since it came into existence; but it has held on its way and paid successive dividends after a most satisfactory fashion. Nevertheless, the "Investors' Review"—rightly valued in London, for the honest, outspoken criticism of its Editor, Mr. Wilson, a hard-headed Aberdonian—had, in its October issue, an attack on the "Dimbula Valley" calling it "A Weak Tea Company." This was not seen by the Managing Director for some time after its appearance; but when it came under his notice, he immediately wrote a reply which we think very thoroughly disposes of the attack. The letter is inserted in the issue of Jan. 7th as follows:—

(From the *Investors' Review*, Jan. 7.)

We shall be as pleased as Punch if the anticipations in the following letter come true:—

Dimbula Valley (Ceylon) Tea Company, Limited.
16, Philpot-lane, London, E.C., Dec. 1, 1897.

Sir,—My attention has been drawn to your article in the *Investors' Review* for October headed "A Weak Tea Company." With reference to the writer's comments on the Dimbula Valley (Ceylon) Tea Company, Limited, I can only say they are unfair in the comparison drawn between this company and the other two named.

In the first place, the writer of the article adds to the Company's capital £6,250, the amount of the mortgages which were taken over when the estates were purchased. These mortgages could only be paid off at certain dates, but the company hold the amount ready to pay them at due date.

In estimating whether our capital is high or low the amount of mortgages should, therefore, not have been added. Then our profit of £14,595 1s 8d was practically derived from 1,440 acres of bearing tea, or at the rate of £10 per acre net profit, whilst I assert without any fear of contradiction that the average profit for the whole of Ceylon is not over £5 per acre.

This shows that the dictum is all wrong of the writer of the article, to the effect that "any tea company's capital which stands over £50 an acre is over capitalised," because it is manifest that a company's gardens which turn out a net profit of over £10 an acre must be worth more than those giving only half that, or even less. The only estate belonging to the company absolutely in full bearing last year gave over £16 per acre profit, and I am aware that it has done something like this for several years. Therefore, no rule such as the writer lays down is applicable to Ceylon, or any other gardens.

I would, in conclusion, point out that in judging the stability or otherwise of a tea company as a safe dividend-paying concern, the net profit per pound of tea realised is the most important guide. A company whose net profit per pound is but a penny, is surely in a very different position from one whose profit is 4d as was, and, I hope, always will be, the position of this company.

Should tea drop 1d a pound, a capital of £50 would be a bit high, would it not?—Yours faithfully,

James Sinclair.

There can be no doubt that the estates belonging to the Dimbula Valley Company are all exceptionally valuable—producing heavy crops of high-grown, high-priced tea.

PLANTING PROSPECTS IN NORTH BORNEO.

We take the following from the letter of a resident of long experience in North Borneo, dated Sandakan, 5th Jan.:—

"You may like to note as news from here that the present prices and future prospects for coffee in North Borneo are filling planters with consternation, and that parts of the forest already felled for coffee are being given up for that purpose and are being devoted to Cotton and Coconuts instead, while efforts are being made to plant up Rubber both Para and Willoughbia. It is a great pity that coffee has fallen in price, as coffee growing was rapidly spreading and offered an easy and expeditious way of making the country prosperous. The size, health and cropping powers of our coffee trees is undeniable, but what is to be done with the price at $20 and not likely to stop long there either?"

Well-prepared good "plantation coffee," however, still keeps up wonderfully in price.

The German Commercial Expedition to China and Japan—having completed its work, (among other trips, penetrating 1,100 miles up the Yangtsekiang in China) is now broken up. Dr. Hermann Schumacher, jr., the accomplished Secretary, with some of the members is now on the way home and the party have been visiting our hill-country. In all there were ten experts in the Expedition: two of these are now in India and two in Siam, afterwards to visit Java and Sumatra. Altogether a valuable body of information must have been compiled by the Commission and Dr. Schumacher is certain to prepare a very useful interesting Report.

IMPROVED TEA MACHINERY.

In our issue of December 3rd we referred to Mr. S. C. Davidson's exhibit of a working model of his new patent "Sirocco" Tea Roller at 120, Bishopsgate Street, C.C., and since then he has sent us copies of three additional testimonials as to the practical working of those machines which he has received—two from Ceylon and one from India. Although the machines to which these testimonials refer have only been at work during the past season the testimony in their favor which we quote will be of interest to our readers, as in each instance the machines have been in use a sufficient time to thoroughly test their working capabilities. The testimonials are as follows:—"From J. Armitage Ogden, Esq. Kirklees Estate, Udapussellawa, Ceylon, November 1897. I have used the Sirocco Roller for the last two months, and am much pleased with it. It takes very little power to drive, keeps the leaf cool, and rolls more evenly than any Roller I have seen. A very strong point, I consider, is the small quantity of broken tea, and even with dry, over-withered leaf the proportion of broken tea is very small, and I have no hesitation in recommending any one to use it, particularly where short of power. The factory coolies like it because it requires no attention whilst working, and is easy to fill, and no trouble to clean after work."

"From W. R. Waller, Esq., Poyston Estate, Dikoya, Ceylon, November 19th, 1897. I am very well pleased with the work the Sirocco Roller does. It works easily with little or no attention, and certainly does not take more than 2 H.P. to drive it. It makes a good wiry tea, well twisted, tippy, and I find less choppy than other rollers. I think the pressure from the ploughs inside, combined with weight of tea, quite sufficient. My teas have been valued and sold for more since I used this roller."

"From Henry Weir, Esq., Kalline Estate, Cachar India, November 22nd, 1897. Davidson's Sirocco Roller is doing very good work indeed", we may also mention that Mr. M. Kelway Bamber who is already well-known to tea planters as an authority upon all matters touching the manufacture of tea, was amongst Mr. Davidson's visitors when he was showing the model of his roller in London at the above address, and Mr. Bamber has since then expressed it as his opinion that the rolling motion given to the leaf in this machine, and the coolness which is at the same time maintained in the leaf during the rolling process, could scarcely be surpassed, while the machine itself is a combination of strength and cleanliness, with evidently a great economy of power. Mr. Bamber further stated that, after having carefully perused Mr. Davidson's new catalogue, he considers that in the machines now illustrated and described for the first time, and also in the older machines, with the improvements which Mr. Davidson has lately made on some of them, the several, chemical and other requirements for the manufacture of good tea rea eminently combined.—*H. & C. Mail* Dec. 31st.

RAMIE FIBRE MACHINERY AND PROSPECTS.

LONDON, Jan. 7.

Yesterday I was fortunate enough to catch

MR. J. M. MACDONALD,

of Ramie fame, at his office in Victoria Street, Westminster— one of a suite of comfortable offices tenanted by Messrs. MacDonald, Boyle & Co., engineers, and Boyle Fibre Syndicate. Mr. MacDonald was in excellent spirits, and spoke most hopefully of the prospects of his decorticating experiments, and of their probable outcome. He will remain in London until late in April, when he intends to start for Johore to superintend the operations in ramie preparation for which, as you are aware, arrangements have already been entered into. "A number of enquiries," said Mr. MacDonald, "have been made here since I arrived in England with reference to the machinery for decorticating, and several Ceylon planters have called on me. One machine has already been got ready for almost immediate dispatch to Ceylon, to the order of Mr. J. Manley Power, who intends to use it for experimental purposes on.

BON ACCORD ESTATE, BOGAWANTALAWA.

I believe Mr. Manley Power purposes to try ramie at first over an area of about seven acres. The machine is to be sent through our agents, Messrs. Lee, Hedges & Co., and while I am on my Johore trip I shall pay a visit to Ceylon in order to superintend affairs connected with the decorticating experiment. I am due to arrive in Johore about the middle of May, and I propose to stay a week in Ceylon." Conversing on the subject of ramie cultivation generally, Mr. MacDonald spoke of what is being done in Jamaica, and referred me to the last-arrived issue of the Jamaica *Daily News Letter*, in which has given an interesting account of the steps that are being taken to begin the cultivation and preparation of ramie on a large scale.

"JAMAICA ISN'T IN IT WITH CEYLON,

to my mind," said Mr. MacDonald; "Ceylon could, I think, do very much better than the Jamaicans." It seems that H.E. the Governor of Jamaica has given the Jamaica Fibre Company, which has been recently formed, his blessing, at the same time pointing out "the danger of the policy of letting any particular industry absorb or monopolise to too great an extent the effort and energy of the enterprising agriculturist." According to the editor of the Jamaica *News Letter*, who has a leading article on the subject, the result of enquiries made of a large number of people whose names were obtained from the Botanical Department is that in most of the parishes of the island ramie will thrive. Nine-tenths of the replies showed that very little care was taken in the cultivation, yet four crops were obtained in the year. Then we come to the Jamaica figures. It is estimated that an acre of ramie will give four cuttings per annum, 40 tons of green stems, "which green stems would be worth to a Central Factory 10/ a ton. An acre would, therefore, yield £20, less the expenses for cutting, which are estimated to be £9." In order that the planters may figure out the correctness of this it is stated that "one man, working 300 days a year, can cut the produce of two acres, and the cost of labour has been estimated at 1s 3d per day." It is mentioned that an offer has been received from the Midlands Spinning Company (England) of £42 a ton for all filasse that the Company produce in the next five years.

THE RAGALLA TEA ESTATES, LTD.

The Third Annual General Meeting of Shareholders was held at the Offices of the Company, 39 Lime Street, London, E. C., on Tuesday, 4th Jan., Mr. C. E. Strachan, presiding

After the notice convening the Meeting had been read, the CHAIRMAN, in moving the adoption of the Report and Accounts, said.—The Report and Accounts have been in your hands for some days, and I presume you will take them as read, but you will, no doubt, expect to hear something from me about the past season's working and our prospects. You will see that we are unable to pay a further dividend on the Ordinary Shares, and I am sure you all feel disappointed, but certainly not more so than your Directors, who own a very large number of Shares in the Company. Circumstances have, unfortunately,

been against us; the crop turned out 50,000 lb. short of estimate, owing to an unfavourable season; prices were nearly 1⅝d per lb. less than we had every reason to expect; rice showed a heavy loss owing to the famine in India; and exchange was somewhat higher than we anticipated All these adverse circumstances have reduced the profits. When we purchased the Ragalla Estate it was principally planted with Coffee, and we depended chiefly on this product for our income. In the course of time it became evident that Coffee was failing us, bug and leaf disease, year after year, were destroying its vitality and reducing the crops in spite of cultivation, and we saw that if we wished to make the Estates productive, and valuable to the Shareholders, we must push on with the cultivation of Tea as quickly as possible. Tea and Coffee will thrive together for a short time, but as soon as the Tea gets its head above the Coffee the question arises, which has to be eradicated. In our case there was no difficulty in deciding, but we deferred uprooting the Coffee as long as possible, so that we might have an income from this product towards meeting our expenditure and earning dividends, and also to give us time to get the Tea well forward. A difficult time is bound to arise during the change, and that time arose last season. A great part of the Coffee was removed, but the Tea—owing to the unfavourable season—did not respond as well as we expected. We have, however, rounded the corner and, as you will see, the tea crop this present season is estimated at 490,000 lb. and we have every reason to believe that this estimate will be secured. We could have adopted the policy of doing nothing, simply harvesting the crops and working the estates in the cheapest way, and we might in this way have earned enough to pay you a dividend for a few years, and perhaps have put aside a certain sum to reserve, but what would have been the final outcome of such a policy? In a few years the coffee would have died out, and we would have been left with a small sum in reserve, but practically unremunerative estates.

What then is your position now? You have no reserve certainly, but you have estates in the highest condition of cultivation, roaded, drained, and planted in the best possible way, with factories and buildings erected. The estates are, we consider, more valuable than the amount they stand at in the books, and will give larger returns each season, thus enabling us, as I hope, to earn good dividends. We feel that in the course we have adopted we have done the best for the estates.

The adoption of the Report was seconded by Mr Evans.

Mr. BISHOP enquired as to the date for closing the accounts, as last year's Balance Sheet was made up to 31st July. He also asked about the future of the Kelburne property, when it was expected the 309 acres non-bearing would be fully productive, and if the estate would earn enough to cover the interest on the purchase-money. In reply the Chairman stated that the Ragalla accounts were for eleven months and the Kelburne accounts for twelve months, the 30th June being chosen as a convenient date for closing the books for both Estates. As to Kelburne the acreage at present non-bearing would be in full bearing in two to three years, and as all the land had been planted with Tea before the Coffee had been removed the Tea was well forward, and the property itself was considered most valuable and fully capable of earning sufficient profits to meet the required interest.

The CHAIRMAN then put the motion to adopt the Report, which was carried unanimously.

On the motion of Mr. HARWOOD, seconded by Mr. EVANS, Mr. HANNEN was re-elected a Director of the Company.

Mr. W L STRACHAN proposed the re-election of the Auditors, Messrs. FULLER and WISE, and this being seconded by Mr. RICHARDSON, was duly agreed to.

TRADE REPORT.

(From the *Chemist and Druggist.*)

London, Jany. 6.

COCAINE.—The manufacturers quote hydrochlorate from 10s 3d to 10s 6d per oz. nominally, and second-hand holders from 9s 9d to 10s per oz. So much stock is held by the latter that the market is lifeless.

COCA-LEAVES.—The available Huanoco is of rather poor quality, and is offered at 8d. Truxillo leaves at 6d to 8d, but the colour of these is not good.

PLANTING NOTES.

CINCHONA AUCTIONS.—The London cinchona auctions for 1898 have been fixed for the following dates: January 25, February 15, March 15, April 26, May 24, June 21, July 19, August 16, September 13, October 11, November 8, and December 13.—*Chemist and Druggist.*

THE EUCALYPTUS-OIL INDUSTRY.—The Tasmanian Eucalyptus Oil Company, Ld. has recently opened a new distillery at Sandy Bay. The first charge of the still was started with some ceremony by the manager and the chief distiller, sample bottles of the "brew" of "Platypus" oil being distributed among those present.—*Chemist and Druggist.*

RAMIE MACHINERY IN CEYLON.—Our London correspondent reports that a well-known Bogawantalawa proprietor is getting out a decorticating Fibre Machine from Messrs. MacDonald, Boyle & Co., to deal with Ramie, grown over some seven acres on his property. Great interest will be felt in the results of this experiment.

GAME PROTECTION.—"E.G.R." replying chiefly to our contemporary of the "Examiner" shows very clearly the wide distinction which should be drawn between the Sinhalese villagers in out-of-the-way districts and the peripatetic as well as ubiquitous hunting and trading Moorman, bent on getting all he can out of the forest, of hides, horns, &c., no matter what may be the rules for Game Protection.

THE CULTIVATION OF ORANGES FOR EXPORT.—*Indian Gardening* publishes an article on the English fruit supply, and suggests the possibility of Indian exportation of oranges to compete with other countries in the English market. It proposes that the Government should set the example by establishing an extensive orange orchard in Nagpur, or Delhi, where oranges of the finest varieties grow to perfection, and develop the export business. "The local fruit-growers would, as soon as they found what a paying business it was, take over the orchards and work them among themselves. That it would pay handsomely to grow oranges for export scarcely needs to be insisted upon, because the finest oranges of Sylhet, the Punjab and Nagpur sell at a rate at which they would undersell the produce of every other country in the world in the English market.—*Pioneer*, January 16th.

DEAFNESS. An essay describing a really genuine Cure for Deafness. Ringing in Ears, &c., no matter how severe or long standing, will be sent post free.—Artificial Ear-drums and similar appliances entirely superseded. Address THOMAS KEMPE, VICTORIA CHAMBERS, 19, SOUTHAMPTON BUILDINGS, HOLBORN, LONDON.

TEA RECRUITING IN INDIA.

In connection with the proposed Central Tea Recruiting Agency, a meeting was held on Tuesday at the Calcutta Chamber of Commerce to receive the Report of the Provisional Committee, to elect a Board of Management, and to consider, certain Resolutions. Sir Patrick Playfair presided, and in a short but appropriate speech introduced the business of the meeting. The important function of electing the five Calcutta members of the Board of Management was then proceeded with, and the result of the voting was in favour of the following firms:—Messrs Begg, Dunlop & Co., Messrs. Williamson, Magor & Co., Messrs. Shaw, Wallace & Co., Messrs. Finlay, Muir & Co., and Messrs. Octavius Steel & Co. The last-mentioned firm tied with Messrs. McLeod & Co., but the latter retired in its favour. The remaining resolutions were then submitted and carried unanimously. The newly-formed Board of Management will proceed to formulate the details of the scheme, so that all may be in readiness to start the agency by the 1st of November next.—*M. Mail*, Jan. 29.

INDIAN TEA SALES.

(From *Watson, Sibthorp & Co.'s Tea Report.*)

CALCUTTA, Jan. 27.

11,285 packages of tea changed hands in the sales held on the 21st instant. The market was quiet, good liquoring teas, which were in small supply, were wanted and sold fairly well, all other kinds sold irregularly but without material change. There was a fair amount of business done for Australia, but the Bombay buyers were again very quiet.

The average price of the 11,285 packages sold is As. 5-2 or about 7d per lb. as compared with 11,249 packages sold on the 21st January, 1897 at As. 5-8 or about 7d per lb. and 13,649 packages sold on the 22nd January, 1896 at As. 6-3 or about 7d per lb.

The Exports from 1st April to 24th January from here to Great Britain are 128,444,645 lb. as compared with 126,925,775 lb. at the corresponding period last season and 115,655,415 lb. in 1896.

NOTE.—Last Sale's average was As. 5-7 or about 7½d.

Exchange.—Document bills, 6 months' sight, 1s 4-5-16d.

Freight.—Steamer—£2-1- 3 per ton of 50 c. ft

PLANTING NOTES.

UNDERSTANDING AMONGST CINCHONA IMPORTERS.—We hear from Amsterdam that at a conference of importers of Java cinchona bark was held there a few days ago at which an understanding was arrived at to endeavour to regulate the price of the article to a certain extent, by offering only moderate quantities at the auctions, and by agreeing not to sell below a fixed minimum price. The auctions of January 20, at which only a moderate quantity is likely to be offered will show whether this understanding is a fact or not.—*Chemist and Druggist.*

THE NEXT BATCH OF TROUT OVA.—The next batch of trout *ova* are expected about the 10th proximo, and the necessary preparation, are being made for their receipt in Nuwara Eliya. The trout-house behind the Kachcheri premises has been thoroughly overhauled under the supervision of Mr. Elhart, and the plant in the building is all being attended to. Of the four hatching boxes now in readiness three are new ones. New piping has been got out, and every precaution is being taken as regards the filtering of the water and the seeving of the sand; while the two ponds which supply the water have been cleaned out.—*Cor.*

COLOMBO COPPERAH MARKET.—This market is practically lifeless owing to the scarcity of copperah. During last week the arrivals were few, and this week the market opened with blank disappointment. There was a fairly good demand both from shippers and millers, and prices ranged from R32 to 38·75 per candy. According to the present market value of oil, which forms the basis of the price of copperah, and leaves a margin for the scarcity of crops, prices paid are fair. But with a reduction on them, they will compare favourably with the price for oil.

CINCHONA IN BENGAL.—Two months ago we referred to the manufacture of quinine and cinchona febrifuge by the Bengal Government during the last official year. It is to be observed in this connection that the cinchona plantations are gradually being enriched by the planting of *Cinchona Ledgeriana* seedlings, no fewer than 248,750 of such plants having been put into the ground, as compared with 20,000 seedlings of the hybrid cinchona. The policy now adopted is to plant the quinine-yielding Ledgeriana almost exclusively, and the result ere long may be that the Government will be able to supply all its own needs, if not more exclusively from its own plantations.—*Chemist and Druggist*, Jan. 15.

THE TRADE IN TEA SEED.—The great demand for Tea seed in the season 1896-7 led to a strong rise in the price of imported seed, and large profits were made by far-seeing importers. This brought about the usual consequences. Seed has been brought down in large quantities from Calcutta during the last two or three months, the market has been flooded, and at the same time the demand has declined. The price of seed has fallen rapidly, and we hear that heavy losses have been incurred by Colombo firms, one firm alone having dropped R10,000. The latest news is that another firm, who imported largely, have had a very large consignment of seed left on their hands, it being found to be rotten on arrival at Colombo.

"THE AGRICULTURAL GAZETTE" of New South Wales, issued by direction of the Hon. Sydney Smith, M.P., Secretary for Mines and Agriculture Volume VIII. Part 12. Edited by W. H. Clarke. Contents for December, 1897, are the following:—Useful Australian Plants; The Grading of Wheats, Judging the Milling Qualities of Prize Wheats at Shows &c.; Chemical Notes; The Kerry Cow; San Jose Scale; Some Notes on Draining; Green Manuring; The Importation of Dairy Produce to Great Britain; The Influence of Bees on Crops; Bee Calendar for January; A Sulphuring Bung; Orchard Notes for January; Practical Vegetable and Flower Gardening for January; General Notes; Replies to Correspondents; List of Agricultural Societies' Shows; Label for Specimens.

A SUBSTITUTE FOR COFFEE.—The United States Consul at Crefeld writes:—Under the name of Katherine's Malz-Kaffee-Fabriken, factories have been established in Germany—of which one exists in this consular district, at Merdingen-on-the-Rhine, and others at Munich and Berlin—for the purpose of manufacturing a coffee substitute from cereals. The invention relates to an improvement in preparing the same, which consists in applying to the grain, during the steeping process, an electric current proportionate to the quantity and quality of the grain, whereby the proteid substances existing in the grain are altered in such a manner that, in the subsequent roasting process, only a small quantity of the products of decomposition (as pyridine and its derivatives, which are objectionable to the taste) can be formed, a substitute pleasant to the taste being obtained. Under this patent, factories have also been established in Austria, Italy, France, Switzerland, and Sweden. The inventor has also applied for a patent in the United States.—*British Trade Journal.*

COLOMBO PRICE CURRENT.

(Furnished by the Chamber of Commerce.)

Colombo, Feb. 1st, 1898.

EXCHANGE ON LONDON: CLOSING RATES. *Bank Selling Rates*:—On demand 1/3 7-8 to 29-32; 4 months' sight 1/3 29-32 to 15-16; 6 months' sight 1/3 31-32;
Bank Buying Rates:—Credits 3 months' sight 1/4 5-32 to 3-16; 6 months' sight 1/4 7-32 to 9-32.
Docts 3 months sight 1/4 3-16 to 7-32; 6 months sight 1/4 9-32 to 5-16

COFFEE.—Plantation Estate Parchment on the spot per bushel R14.00. Plantation Estate Coffee, f.o.b. on the spot per cwt. R77·50. Liberian parchment on the spot per bus. R5·00. Native Coffee f.o.b per cwt. 42·00

TEA.—Average Prices ruling during the week Broken Pekoe, per lb. 44c. Pekoe per lb. 33c. Pekoe Souchong per lb. 27c. Broken mixed and Dust, per lb. 19c. Averages of Week's sale.

CINCHONA BARK.—Per unit of Sulphate of Quinine per lb 6½c.

CARDAMOMS.—Per lb R2·03

COCONUT OIL.—Mill oil per cwt. R11.37½ nominal Dealers' oil per cwt. R11·25 Coconut oil in ordinary packages f.o.b. per ton R282.50 nominal

COPRA.—Per candy of 560 lb. R40·00

COCONUT CAKE: (Poonac) f.o.b. (Mill) per ton, R67·50

Cocoa unpicked and undried, per cwt. R49·50.

COIR YARN.—Nos. 1 to 8 { Kogalla R17.25 / Colombo R16 00 }

CINNAMON.—Nos. 1 & 2 only f.o.b. 57c.
Do Ordinary Assortment, per lb 51c.

EBONY.—Per ton No sales

PLUMBAGO:—Large Lumps per ton, R365
Ordinary Lumps per ton, R345
Chips per ton, R220. Dust per ton, R145 00

RICE.—Soolye per bushel, { R 3.35 to 3·80
,, per bag, { R8.90 to 9·50
Cost Kara per bus. none
Coast Calunda per bushel, R3·80 to R3·95
Mnttusamba per bushel, R4·50 to R4·75
Kadappa and Kuruwe per bushel, R3·30 to R3 27
Rangoon Raw 3 bushel bag.—R9.50 to 10.00

LOCAL MARKET.

(By Mr. James Gibson, Baillie St. Fort.)

Colombo Feb 1st, 1898.

Estate Parchment:—per bushel R14·00 to 14·75
Chetty do do R12·00 to 13·00
Native Coffee / do F. O. B per cwt } R41·00 to 42·00
Liberian coffee:—per bush R4·50 to 5·00
do clean coffee:—per cwt R31·00 to 35·
Cardamoms Malabar:—per lb. R1·25 to 1.
do Mysoore do R2·00 to 2·5
Cocoa unpicked per cwt R44·00 to 48·00
do picked do R50·00 to 54.00
Rice Market List
Soolai per bag of 164 lbs nett R8·90 to 9.50
Slate & 1st quality soolai:- per bushel R3·65 to 3.80
Soolai 2 & 3rd. do do do R3.45 to .55
Coast Callunda R3·80 to 4.00
Muttusamba ordinary R4.50 to 4.75
Kuruvee R3.20 to 3.37
Coast Kara R3.60 to 3·80
Kazala R3·25 to 3·30
Raw Rangoon Rice per bag of 3 bushels R9·60 to 10·00
Cinnamon, per lb No 1 to 4 at 56 to 58cts.
do do 1 to 2 65cts
do Chips. per candy R80·00
Coconuts. Ordinary per thousand R35.00 to 37.00
do Selected do R38 00 to 40.00
Coconut Oil per cwt 12·75 nominal*
do F. O. B. per ton 287·50 to 290 †
Copra per candy:—
Kalpitiya do R35.00 to 35.50
Maravila do R36.50 to 37.00
Cart Copra do R33.00 to 33·50
Poonac Gingelly. per ton 90.00 to 94.00
do Chekku do R72.00 to 76.00
Mill (retail) do R70.00 to 75·00
Cotton Seed do R80·00 to 82
Satinwood per cubic feet. R2.00 to 2.50
do Flowered do 6.00 to 8.00
Halmilla do 1.30 to 1.70
Palu. do 1.30 to 1.40
Tuun Pali do R1.30 to 1.40
Ebony per ton R1 o 80s80
Kitul fibre per cwt R35.00
Palmyra do do R9·00 to 22·50
Jaffna Black Cleaned per cwt 18·00 to 20·00
do mixed do R17.00 to 18
Indian do R9.00 to 17.50
do Cleaned do R12.50 to 22·50
Sapanwood per ton R50
Kerosine oil American per case. R6·75 to 7·25
do Bulk Russian per tin R2.50 to 2·53
do Russian in Case R5.00 to R5·12
do Sumatra in Case R5.00 to 5·12
Kapok Cleaned F. O. B. per cwt—R27·00 to 28·00
do unpicked do R7·50 to 8·00
Croton Seed per cwt 36.00 to 40·00
Nux Vomica do R5.50 to 6.00

Plumbago per ton, according to quality { Large lumps 260 to 380 / do ,, 240 to 360 / do Chips 120 to 230 / do dust 90 to 140 }

† In hogsheads transactions
‡ In mixed packages: nomina

CEYLON EXPORTS AND DISTRIBUTION

1897-98.

COUNTRIES.	Coffee cwt Plantation	Coffee cwt N'tive	Coffee cwt Total.	Cinchona. 1898 B'nch & Trunk lb	Tea. 1898 lb.	Tea. 1897 lb.	Cocoa cwt.	C'moms lb.	Cinnamon Bales lb	Cinnamon Chips lb.	Coconut Oil 1898 cwt.	Coconut Oil 1897 cwt.	P'bago 1898 cwt.
To United Kingdom	876	..	876	35929	7180568	5210053	6113	16517	80750	19576	..	7108	7703
,, Austria	..	...	..	..	1595	..	...	..	...	22400	...	..	..
,, Belgium	10	..	10	..	3340	..	190	..	7500	5600	..	..	4209
,, France	..	..	..	..	...	12658	...	..	...	..	..	..	..
,, Germany	..	..	..	..	24417	...	225	14806	19300	22680	..	..	1274
,, Holland	..	..	...	..	...	3705	..	..	...	..	..	..	..
,, Italy	..	..	..	..	90	115	..	..	8500	2396	..	..	...
,, Russia	..	..	..	..	...	..	..	..	..	..	...	..	...
,, Spain	..	..	..	...	7000	500	..	..	...	..	..	..	..
,, Sweden	1	..	1	..	11589	1600	..	..	...	..	..	..	101
,, Turkey	..	..	..	..	498	...	...	..	...	..	...	..	..
,, India	...	..	..	..	33169	33406	...	2437	...	...	5704	3777	15
,, Australia	178	..	178	..	1033519	731833	...	..	1100	2800	163	..	..
,, America	..	..	..	29448	126404	66866	77	..	10000	..	..	4010	4529
,, Africa	..	..	..	724	40570	6392	..	...	..	..	..	..	..
,, China	..	..	..	..	69670	3350	..	..	..	..	..	..	..
,, Singapore	..	..	..	..	...	1195	93	..	..	..	4498	..	..
,, Mauritius	..	..	..	..	...	...	..	..	..	..	..	..	..
,, Malta	..	..	...	...	550	...	..	..	..	..	..	..	..
Total exports from 1st Jan. to 1st. Feb. 1898	1065	..	1065	66101	8532979		6698	33760	127150	97024	10365		17837
1897	953	..	953	16273	6071 7		4470	14364	149237	13632	14895		6923
1896	1621	91	1712	70677	6876195		1751	10968	145570	71312	11228		9582
1895	5404	..	5404	46843	7686544		2377	15076	123104	17050	18700		7224

THE

AGRICULTURAL MAGAZINE,

COLOMBO.

Added as a Supplement Monthly to the "TROPICAL AGRICULTURIST."

The following pages include the Contents of the *Agricultural Magazine* for February :—

Vol. IX.] FEBRUARY, 1898. [No. 8.

SEASON REPORTS FOR DECEMBER, 1897.

W*ESTERN Province.*—Paddy. Maha crops in blossom and in some parts in ear. Fields for Yala paddy in preparation in a few districts. Fruits and vegetables scarce. Rain fell generally over the province. Paddy prospects fair.

Central Province.—Paddy. Maha crops blossoming (in some parts being transplanted) in the Kandy district, prospects good in the Matale district where the fields are in plants, in ear in the Kotmale district where the prospects are also good; ploughing for Maha in Walapane and Uda Hewaheta. Rainfall in Matale 16·74 in.

Northern Province.—Paddy. Crops that survived the drought are in blossom and ear. No cattle disease reported in the Northern Province. Rainfall at Jaffna 17·18 in., in Mannar 19·32 in.

Southern Province.—Paddy. In ear in all the pattus in Galle district; cultivation under Walawe channels commenced; sowing for Maha at Tissa over and crop in blade. Prospects in the Province generally good. No cattle disease reported. Rainfall in Galle 4·98 in.

Eastern Province.—Paddy. Some damage by drought to the Munamri sowing in Batticaloa, but out of 30,000 acres, 23,000 are in excellent condition; crops thriving in Trincomalee. Rainfall in Batticaloa, 29·17 in., in Batticaloa 27·22 in., except in Batticaloa south, the province is free from cattle plague.

North-Western Province.—Paddy. Crops in various stages, prospects fair; some damage done by the paddy fly in the Puttalam district. Two cases of murrain in the Chilaw district. Rainfall 4·83 in Puttalam.

North-Central Province.—Paddy. In early stages of growth. Rainfall 18·28 in. in Anuradhapura. Cattle disease on the decrease.

Province of Uva.—Paddy. Harvesting of Yala (somewhat damaged by rain), Maha cultivation going on. Chena crop prospects good; health of cattle satisfactory. Fruits and vegetables plentiful and cheap.

Province of Sabaragamuwa.—Paddy. Crops not damaged by floods in good condition. Province free from cattle disease. Rainfall at Ambanpitiya 16·85 in., in Ruanwella 12·02 in.

RAINFALL TAKEN AT THE SCHOOL OF AGRICULTURE DURING THE MONTH OF DECEMBER, 1897.

1	Wednesday ..	·13	17	Friday ..	Nil
2	Thursday ..	·55	18	Saturday ..	Nil
3	Friday ..	Nil	19	Sunday ..	Nil
4	Saturday ..	Nil	20	Monday ..	·20
5	Sunday ..	Nil	21	Tuesday ..	1·63
6	Monday ...	Nil	22	Wed. esday ..	Nil
7	Tuesday ..	·20	23	Thursday ..	Nil
8	Wednesday ..	·71	24	Friday ..	·15
9	Thursday ..	Nil	25	Saturday ..	Nil
10	Friday ..	·30	26	Sunday ..	Nil
11	Saturday ..	Nil	27	Monday ..	Nil
12	Sunday ..	·93	28	Tuesday ..	Nil
13	Monday ..	·21	29	Wednesday ..	Nil
14	Tuesday ..	Nil	30	Thursday ..	Nil
15	Wednesday ..	Nil	31	Friday ..	Nil
16	Thursday ..	3·53	1	Saturday ...	Nil
				Total ..	8·41

Greatest amount of rainfall in any 24 hours on the 16th, 3·53 inches.

Mean rainfall for the month ·27 in.

Recorded by A. R. JEREMIAH.

DENITRIFICATION—THE OTHER SIDE.

In the November number of the *Agricultural Magazine* there was published a *resumé* of an article by Dr. Somerville on "Denitrification." In the *Mark Lane Express Almanac* appears a contribution from the pen of Dr. Bernard Dyer, in which that well-known authority critically examines the experiments referred to in Dr. Somerville's article. Referring to the work of the German investigators the writer says:—

"The discovery may throw some light on the failure of artificials in some English Agricultural experiments to make any material or satisfactory addition to the produce obtained by dressings of dung, and there is no reasonable doubt that dung, under some circumstances, may be a wasteful instead of an economical addition to the soil; nevertheless, the vast mass of practical experience of good effects following the use of dung makes it difficult to believe that the circumstances under which its action is baneful rather than beneficial to the farmer are the frequent circumstances of every day farming, and it is impossible to avoid a hope that it may eventually be proved that the conditions in which these ill-effects arise are exceptional rather than general in practical field work German investigators are, however, thorough in their work, and no doubt the subject will continue to receive attention until its practical side is completely elucidated."

In 1891 Dr. Dyer and Mr. Rosling carried on some experiments in the manuring of cabbages. Dung alone gave an increase of 5 tons 13 cwt. per acre over the unmanured crop. The yield was somewhat decreased where superphosphate alone was added to dung. Where nitrate of soda and dung were used the increase rose from 5 tons 13 cwt. to 7 tons 6 cwt. When "super" and nitrate, either with or without salt, were both added to dung, there was a further increase over the dunged crop up to nearly 7 tons per acre. Guano when added to dung raised the increase from 5 tons 13 cwts. to 7 tons 15 cwt.; two cwt. of nitrate added to dung and guano gave 1½ tons more, while the addition of 2 cwt. more of nitrate gave still another ton of cabbages, the addition of salt to the dung, guano and nitrate making the increase 2 tons greater, bringing it up to 12 tons 8 cwt. or nearly 7 tons more increase than was made by dung alone.

Here then, in these experiments, the dung alone gave a substantial increase, which was more than doubled by the judicious addition of artificials. It will further be observed that there was no indication of the alleged depressing action of dung, nor of the intensifying of that action by superphosphate. Dr. Dyer gives the details of another series of experiments carried out in 1892, and concludes by saying: Here again we have chemical fertilizers working well by themselves, and dung working well by itself, with a largely increased advantage from the use of both together.

Again, Dr. Dyer refers to an extensive series of experiments conducted by himself and Mr. Shrivell in Kent, where the dung used was by no means well-rotted stable manure, the result of which were that dung with phosphates and nitrate of soda produced 1½ tons more of crop than the artificials without dung.

These experiments were extended to a large variety of crops, and their general result was to show that though a full dose of artificials produces better results than dung alone, yet the heaviest crops are most frequently grown where a moderate dose of dung is used in addition to a liberal supply of artificials. It undoubtedly, however, occasionally happens, says Dr. Dyer, that the plot heavily manured with artificials without dung beats the similarly manured plot to which dung also is applied, but he points out that this is *not generally* the case. The chief ecconomical value of dung, as pointed out, lies in its mechanical action which, however, says the writer would be too dearly purchased if dung has the destructive action on nitrate which the German experiments attribute to it.

Dr. Dyer honestly confesses that the results of the experiments detailed by him do not go to prove that dung is not destructive to nitrates, but that they indicate that the destruction, under at any rate some practical conditions, is not large enough to render the addition of artificials to dung otherwise than advantageous and economical.

With reference to the action of phosphates and kainit in intensifying the denitrifying action of dung, Dr. Dyer points out that this is directly contrary to the experience of Holdefleiss of Proskau (given in the R. A. S. E. Journal for December, 1893) who found that a dung heap of 6 tons, left uncovered, lost in six months 23 per cent nitrogen, and that when 6 per cent of kainit was introduced into a similar heap, no nitrogen was lost. When phosphatic gypsum was used there was again no loss of nitrogen. Holdefleiss also found that the dung treated with potash salts produced double the increase of potatoes produced by pure dung; while the dung treated with phosphatic gypsum produced four times the increase.

In an experiment with wheat, dung with phosphates gave an increase of grain 2½ times as large as that given by dung alone, while dung with potash salts gave nearly three times the increase.

Dr. Dyer thus concludes his practical article: Next to the great discovery of the special source of nitrogen in leguminous crops, the subject is one of the most interesting, as well as the most economically important, that agricultural chemists have attacked in modern times, and it is so complicated that it will probably hold the field for some time to come. Meanwhile, we are all indebted to Dr. Somerville for his timely, if somewhat disconcerting article.

OCCASIONAL NOTES.

The prize offered for the best milch cow at the last Horse and Cattle Show held on the Havelock Race-course was awarded to the Government Dairy's "Merry Girl."

The School of Agriculture re-opened after the Christmas holidays on the 15th January. The

number of applications for admission received was larger than it has been for some years past.

A Reading Room, where a large number of Agricultural Journals are laid on the table, has been opened at the School, and is available to the students and any visitors who may wish to make use of it.

Dr. Somerville, of the Durham College of Science, the contributor of the important paper on Denitrification which we summarised in our November number, writing to us on December 28th last, says:—"I am interested to learn of the manner in which your crops are fertilized, and I should think that if they receive a dressing of farmyard manure to the extent of 20 to 30 tons per acre, they will not require a great deal of other substances. I am not sure that any great loss would occur from mixing organic (inorganic ?) substances with properly decomposed farmyard manure. It is mainly when that substance is in a raw condition that it is likely to be a serious source of loss. Your suggestion to defer the application of nitrogenous manures for two or three months after the dung has been applied will certainly prove effective in preventing loss."

We are glad to learn through Dr. Somerville that he believes Prof. Wallace's health is now much better. This is good news, as the last information we had of the Professor gave the very worst accounts of him.

Mr. A. R. Jeremiah of Krian, Parit Buntar, Straits Settlements, returned to the Straits early in January after going through a course of two years' study at the School of Agriculture, Colombo.

Mr. Edward Elliot, late of the Ceylon Civil Service, who is now engaged in agricultural work, in a letter explaining his inability to attend the late prize-giving held at the School, wrote:—I trust you will have a successful meeting and some good speeches, and that someone will impress the necessity for liberal expenditure on both agricultural education and experimental cultivation. Nothing can be achieved without this, and unless it is continued for a very long period, if not indefinitely. The idea of agricultural instructors was an excellent one, but they were starved and expected to give illustrations and show results without any funds. I saw this and tried to remedy the mistake . . . . and secured data which were valuable, and the correctness of which I have since verified, besides tangible results proving the correctness of the methods followed. Efforts in Ceylon are too spasmodic, and there is too great an anxiety to see "will it pay" within a very limited period of time. They seem to be ahead of us in this respect in India, and of course the Australian system of agricultural education, theoretical and practical, is splendid, and the Governments there do not grudge a large outlay. Look at the breed of cattle. What has Government done to improve this? Sir Hercules Robinson many years ago introduced some stud-bulls. Unfortunately they were not very suitable—too big for the mates available in this country. They were soon sold off, though they were slowly fulfilling their purpose. This subject wants taking up, but there is no use issuing circulars to Government Agents and not giving them funds to carry out any plan agreed on. A sum of R10,000 a year would be well spent on this subject, and should be guaranteed for ten years to enable work on a regular system.

The Government Dairy has now paid back all the advances amounting to R11,500 made by Government from time to time for the working of the Establishment.

It is proposed to hold an Agri-Horticultural Show in Colombo about the middle of the year. The School of Agriculture grounds are spoken of as the probable site of the Show.

The second batch of Forestry students will complete their course of Study in February, and a new class admitted at the beginning of March next.

The following publications have been received and are acknowledged with thanks:—

Foreign.—Queensland Agricultural Journal, The Agricultural Journal of the Cape of Good Hope, The Journal of the Royal Agricultural Society, Transactions of the Highland and Agricultural Society of Scotland, Agricultural Ledger of India (No. 17 of 1897). The Scottish Farmer, The Indian Agriculturist, Barbados Agricultural Gazette and Planters' Journal, The Australian Tropiculturist, The Sugar Journal and Tropical Cutivator (Mackay, Queensland), Central African Times. Our thanks are due to Mr. F. H. M. Corbet for copies of the Imperial Institute Journal and Pharmaceutical Journal, to Mr. John Ferguson for the Journal of the Society of Arts, Agricultural Gazette of New South Wales, Live Stock Journal Almanac, Mark Lane Express Almanac and Agricultural Annual, and the Adelaide Observer.

Local.—The Magazines of St. Thomas' College and the Royal College, Our Boys, The Ceylon Review, Tropical Agriculturist, Ceylon Churchman, Ceylon Forester, St. Paul's School Magazine, Circular No. 3 of the Royal Botanic Garden.

The Tick question has for some time been engaging the close attention of scientific and practical agriculturists in the Southern Continent. We have now received a request (through Mr. J. Drieberg, District Engineer, Puttalam) from Queensland for information regarding our local varieties of the Tick, together with preserved samples of the Queensland Tick and bottled solutions for sending samples of local specimens. We have referred the matter to the Colonial Veterinary Surgeon, Mr. G. W. Sturgess, for his report.

CALATROPIS FLOSS.

Referring to the floss of *Calatropis procera*, Mr. Cross, Scientific Referee on Fibres to the Imperial Institute, reports that it is an extremely interesting type, containing a very high, and, in his experience, unique percentage of

furfural (an oily product obtained on distilling bran with hydrochloric acid, but also afforded by all fibrous substances in a greater or less degree). He adds, however, although it may find use for some applications of floss fibre, its somewhat unfavourable chemical characteristics are not likely to recommend it to the spinner in view of the present low price of cotton (at the end of last year).

The practical expert referee on fibres (Mr. C. E. Collyer) to whom the floss was submitted, has furnished the following report:—This particular floss was in considerable demand in the markets a few years ago for fancy textile purposes, but owing to the difficulties presented by the variations in the quality of parcels supplied, and to the intermittent supply when requirements arose, the material has dropped out of use. The quality of the Indian growth is inferior to the product of Java, which is probably derived from *Calotropis gigantea* (the Ceylon species), small samples of which have occasionally been received from India. The specimen now submitted is of fair colour, and of rather short staple somewhat towy in character, containing an excessive quantity of inferior immature fibre and seed fragments.

Mr. Collyer is reported to have inspected many varieties of the floss in question, mostly from Calcutta (where it is sometimes called "Akund cotton"), which were mostly inferior to the sample referred to in the above report. These samples were sold at as low a price as one penny per pound, and there was but little demand for it even at that price. The trade in the floss, it is thought, may possibly be revived if a moderate but continuous supply can be guaranteed. If of good quality, the price it would realize ought to range from 4 to 5 pence per pound, c.f. and i. terms. In packing for sale, the floss should be handled as little as possible, the pods and seeds being entirely removed, and the floss left in its natural condition unopened; any discoloured portions should be separated and forwarded separately. The bales received in London from Java usually contain 80 to 90 lbs. of floss tightly sewn in canvas, not pressed. In a letter to the *Ceylon Observer*, dated 24th May, 1895, Messrs. Thirkell & Co. wrote: "In conclusion we would ask for samples of the silk cotton or floss from the seed pod of the *Calotropis gigantea* or *Mudar* for which a demand appears to be springing up, present value about 6d. per lb. landed in London."

Later in the same year samples of wara floss were sent with other fibres from the Colombo School of Agriculture to London for report, but no definite opinion was received as to its value, the only remark made being that it was of no use in the fibre (rope) trade. The value of the floss as remarked above is, however, for fancy textile purposes.

FRUIT CULTURE.

(Continued.)

On no account should the common custom be followed of bottoming every tree-planting hole with a shovelful of manure under the idea that the tree is getting thereby a special mark of attention. Independent of the fact that "manure" too often means raw stable dung, fermenting fast and reeking with ammonia, there is this to be considered, that natural manurial agents can only be satisfactorily taken by the fine hair-roots when presented in a very dilute state by the help of water. Moreover, the fermentation and decay of this organic matter gives off a large quantity of carbonic acid gas, filling up the interstices of the soil and driving upwards the atmospheric air which ought to fill them. Were it not that gases have a wonderful power of diffusion and dilute themselves away with great rapidity, the custom of bottoming tree-pits with fermenting dung would have been dropped long ago as a sure means of asphixiating the roots. If the soil is of average fertility and well prepared, or if being somewhat poorer, a little old well-rotted manure has been added during the trenching, there is not the least need for the manuring of the hole referred to.

As a general statement it may be said that orchard manuring is best done by top dressing, and turning the material into the upper tilth to be carried slowly by solution down to the level of the roots. It is a good plan to have a plan of the orchard in which the rows are plotted and the individual trees have their names entered. This will enable one to identify each tree—as labels soon become illegible and no reliance can be placed upon a vague remembrance—distinguish the qualities of one from the other, and enable him to gain a general knowledge of fruit trees. If supports are necessary for transplants, thebest plan is to put in two stakes 14 to 15 inches distant from the tree and tie it to a cross-bar fastened horizontally from one to the other: a single stake driven in among the roots is objectionable.

When the trees have been firmly established, the condition of openness and aëration with free passages of moisture through it and away must be maintained.

The whole of the ground between and among the trees has to be kept in an open worked condition, not only because it would otherwise harbour weeds which would draw sustenance from the soil which belongs to the trees, but for another and important reason. An open pulverulent tilth at the surface is the best preventive of evaporation from the underlayers in which the roots lie and perform their functions. As soon as a hard continuous surface-crust is formed, the uninterrupted capillary attraction exerted by the interstices of the soil-particles draws the moisture of the lower strata up to the heated crust, where it evaporates as fast as it is transmitted. It is not long therefore before the feeding-bed of the roots under such surface-crust is far too dry for their proper functions, the growth of the root hairs ceases, and the tree begins to show signs of flagging. Matters cannot be set right, as some ignorantly suppose, by flooding the root-bed with water. As the water gets slowly away by percolation, most of it is evaporated from the surface and the crust reproduced, with the inevitable result of the same capillary rising of the very water just administerd and its dissipation into the air. There is therefore a pernicious alternation of a fast and feast forced upon the roots. The

true remedy consists in interposing a loose powdery or fibrous stratum several inches thick between the layer of soil in which the roots live and perform their functions and the external air ever greedy of moisture. And there are two ways of doing this.

THE MANURING OF PADDY.

Report on the proportions in which Bood Mixed Thomas' Phosphate Powder and Sulphate of Potash may be used as manure for paddy.

I propose to base my calculations on the results obtained at the Bardwan Experimeutal Farm for years 1894 and 1895. The following is a tabular view of the experiments:—

Quantity of Manure per Acre.			Outturn per Acre.			
			1893—1894		1894—1895	
	Mds.	S.	Grain	Straw	Grain	Straw
			lbs.	lbs.	lbs.	lbs.
1 Cowdung	150	8	3641	4388	3291	4287
2 Unmanured	—	—	1343	1714	1330	1577
3 Castor Cake	6	0	3334	4114	3195	4251
4 Cowdung	150	0	4443	5691	3845	5279
5 Unmanured	—	—	1646	3291	1467	2743
6 Bone-meal	3	0	4321	6295	3826	5993
7 Do	3	0	3707	3801	4637	6267
8 Unmanured	—	—	1786	2332	1574	2061
9 Bone-meal	3	—	} 4690	6308	4673	6377
10 Saltpetre	—	30				

I take the Indian maund to be equal to 9·8 gallons; *i.e.*, a maund of water would weigh 98 lbs. equal measures of bone-dust, and of water would weigh about the same; so in round numbers I shall take the maund of bone-dust as equal to 100 lbs. and the maund of niter as about 111 lbs. Experiments 7 and 9 will be, therefore, when stated in lbs. per acre as follows:—

No. 7.

300 lbs. bone-meal per acre.

No. 9.

300 lbs. bone-meal per acre.
83 „ nitrate of potash.

The first of these (No. 7) would supply 10·5 to 13 lbs. of nitrogen and 70 lbs. of phosphoric acid per acre. The second (No. 9) would supply 21·3 to 22·8 lbs. nitrogen, 70 lbs. of phosphoric acid and 83 lbs. potash.

The following are mixtures containing the same amounts approximately of nitrogen, phosphoric acid and potash.

(1.) Corresponding to the 300 lbs. per acre of bone-dust, the following mixture might be used:
86 lbs. Blood-meal.
370 „ Thomas' Phosphate Powder.

(2.) Corresponding to 300 lbs. bone-meal and 83 lbs. nitrate of potash:
163 lbs. Blood-meal.
370 „ Thomas' Phosphate Powder.
66 „ Sulphate of Potash.

As a certain amount of nitrogen in the form of nitrate is regarded as of special efficiency to rice in the earlier stages of its growth, it is found desirable to have nitrogen present in two forms (according to some authorities) a more soluble form, say, nitrate of potash and a less soluble form, say, blood-meal, instead of the last mixture, therefore the following may be used:—

(3.) 86 lbs. Blood-meal.
83 „ Nitrate of Potash.
370 „ Thomas' Phosphate Powder.

In experiment 7 in the table, the amount of nitrogen is a little over half what it is in experiment 9, while the bone-dust alone in experiment 7 contains about the quantity recommended in "The Farmers' Guide" for the manuring of rice. I am, therefore, of opinion that the increased yield in No. 9 is not necessarily due to the extra nitrogen, but may be attributed to the potash in the experiment.

I think, therefore, that the following mixture would give good results, more especially in cases where the soil already contained a fair amount of nitrogenous matter:

(4.) 86 lbs. Blood-meal.
370 „ Thomas' Phosphate Powder.
66 „ Sulphate of Potash.

In all these mixtures (1 to 4) I have taken 370 lbs. Thomas' Phosphate powder as the quantity containing phosphoric acid equal in amount to 300 lbs. bone-meal. I am disposed, however, to regard 370 lbs. as a maximum quantity, and it is possible that even 300 lbs. would be sufficient, when the greater availability of the phosphate powder is taken into account.

On upland peaty soils, rice could be grown without nitrogenous manure. On such soils 300 lbs. acid phosphate and 100 lbs. muriate of potash are said to give remunerative results. I am, therefore, of opinion that the following mixture would do even better on such land, the Thomas' phosphate powder tending to correct by means of its lime the natural acidity of such soils:

(5.) 300 lbs. Thomas' Phosphate Powder.
100 „ Sulphate of Potash.

100 lbs. sulphate potash does not contain so much potash as 100 lbs. muriate of potash does, but with the former there is considerably less loss by drainage through the ground than with the muriate, and, therefore, I think the sulphate would be practically equal in manurial effect, weight for weight to the muriates.

Another authority recommends the following manures for use in the cultivation of rice on new fields and on exhausted fields respectively: The figures are given in lbs. per acre.

	New fields.	Exhausted fields.
Sulphate of ammonia	89	178
Acid phosphate ...	222·5	356
Muriate of potash ...	44·5	80

In place of the above the following might be substituted:

	New fields.	Exhausted fields.
Blood-meal ...	150	300
Thomas' phosphate powder ...	222	356
Sulphate of potash ...	45	80

(Signed) M. COCHRAN, F.C.S.,
City Analyst.

ADHATODA.

No. 10 of the Handbooks of Commercial Products (Imperial Institute Series) published by the Government of India, deals with *Adhatoda vasica* (known in Ceylon by the various names of Adathoda, Agaladara, Wanepala and Pavettai). It will be remembered that this is the plant concerning the insecticidal properties of which so much was written some years ago. These properties have now been fully discussed, and the various experiments made with the leaves to test their action on insects are referred to in the publication under notice. It will suffice, however, to quote the "conclusions" given at the end of the Handbook:—

The leaves of adhatoda are insecticidal in the same way as tobacco, but being a vegetable its effects are not so powerful as the alkalis and arsenites of the inorganic kingdom. Tobacco and its preparations decompose when exposed to the air, and their poisonous effects pass off after they have served their purpose in killing the blights. This is a great advantage over the use of such substances as London purple which are poisonous as long as they remain in a concentrated form, and, if left upon them, are likely to injure, sometimes fatally, the trees or shrubs. Tobacco is now almost abandoned as an insect destroyer by horticulturists, but it is feared adhatoda is not in a position to be a substitute for it. The experiments have shown that the plant is distinctly poisonous to certain forms of insect life, but the results so far as they have gone may be held as very possibly not justifying its extended use in tea gardens. In fact it is questionable how far insecticides of any kind are practicable.

The chemical analyses have revealed the presence of an alkaloid vascine as the active principle, and this result has been confirmed by the physiological as well as chemical tests of Dr. Boorsma, of Java. A tartrate of vascine is now an article of commerce on the Continent and future possibilities may be expected of it in medical science.

The abundance of nitrogen in the plant shows it to be worthy of the confidence placed in it by the native cultivators as a manure, and its fertilising properties are not confined to the organic matter, but are also due to the large quantity of mineral salts.

The opportunity is taken of thanking the numerous contributors who have assisted with information and experiments, and in elucidating certain features of one of the most ancient drugs employed in Hindu medicine.

Dr. Trimen thus refers to the plant in his *Ceylon Flora*:—Much cultivated by the natives as a fence. Largely grown about Jaffna as green manure for tobacco gardens. The Tamil name means that goats will not touch it. The juice of the leaves, also the flowers and bark, are used medicinally in children's coughs; the leaves are bitter, but have no scent when bruised. Hermann states that the bark was used to procure abortion, whence its name *Ecbolium*. The name "Malabar nut" is applied to it by the English in India— a name I have never heard here.

THE AGRICULTURAL SCHOOL.

PRIZE DISTRIBUTION.

The prize distribution at the Agricultural School took place last evening, when the Acting Mayor and Chairman of the Municipal Council, Mr. W. E. Davidson, presided. The Hall where the prize distribution took place, and the passage to it from the entrance, were very nicely decorated with flowers, ferns and flags. At the entrance to the premises a pandal had been put up with an inscription welcoming the Mayor. Among those present were Messrs. J. B. Cull, S. C. Obeysekera, Dr. and Mrs. J. B. Drieberg, Mr. and Mrs. J. Drieberg, Mr. A. Drieberg, Advocate and Miss Drieberg, Mr. Jacob De Mel, and Misses De Mel, Mr. and Mrs. James Peris, Mr. Charles Peris, Mrs. Human, Dr. and Mrs Asserappa, and Miss Asserappa, Mr. and Mrs. E. C. Davies, Mr. and Mrs. A. Y. Daniel, Mr. G. W. Sturgess, &c.

THE REPORT.

Mr. Drieberg, the Principal of the School, read the following report:—

It was only recently that a detailed report of the working of this Institution was made by me for the Director's Administration Report, and as there is little that I can now add to that document, I have not much to give you in the way of a report today.

I am frequently asked the question, "How many boys have you here?" and the enquirer generally takes it for granted that the spacious accommodation afforded by this building, which someone has remarked is the only site worthy of the future University of Ceylon, that all this luxury of space was monopolised by a handful of agricultural students. I would then explain to the visitor that the building known as the School of Agriculture harboured no less than four Schools, viz., the Agricultural School, the Forestry School and the Training School—the three working more or less independently of each other —and the Practising School which is affiliated to the last mentioned; while a large section of the grounds is in the occupation of the Government Dairy. I am glad to be able to say that the building itself which some three years ago was pronounced by the Public Works' Officer in charge to be in a dangerous condition, has been gradually renovated block by block.

The students of the Training and Forestry Schools have a more or less definite prospect of employment under Government, as teachers and Forest Officers respectively, but the boys of the School of Agriculture have not that advantage. It may be said that they are expected to pursue knowledge for its own sake; but that has not proved to be a sufficiently strong inducement in technical instruction in Ceylon. It was on this account no doubt that Government generously decided to provide students who go in for a course of training in mechanical engineering and the allied subjects, with certain openings for admission into its scientific departments, and it is to be hoped some such inducements, will also be held out to those who choose to study agricultural science, seeing that it underlies an art which so widely and deeply affects the welfare of the country. This is all the more to be desired, as the superior prospects of the present students

of the Technical College have been the indirect means of draining the sources from which Agricultural Students have been drawn.

In this connection I should like to read to you a passage from the Resolution of the Government of India on the Report of the Bengal Agricultural Department for 1896-1897. It runs as follows:—"The Agricultural Conference held in Calcutta in 1896 recommended (1) that the course of study in primary and middle schools should be so revised as to include a graduated series of lessons in agriculture and in other subjects of Elementary Science; (2) that agricultural classes should be opened in connection with Sibpore Engineering College; and (3) that a certain number of appointments in the Public Service should be reserved for those who have received an agricultural education. Sir Alexander Mackenzie accepted these recommendations. The sanction of the Government of India has recently been received to the opening of the agricultural classes at Sibpore, and the details of the scheme which will soon be published for giving effect to all these recommendations of the Conference are now being worked out. There should therefore be a hopeful outlook for agricultural education and agricultural reform in India, and if a similar "resolution" of the Governor of Ceylon be passed, we of this institution will have good cause to congratulate ourselves and set to work with better cheer; for the result will be that a number of students of fair intelligence and respectability will be drawn to the school each year, and that the teachings of modern agriculture will find in them a good nidus and eventually leaven the whole mass of our rural population.

Suggestions have come from different sources, but agreeing in the main, for giving agricultural instruction in Ceylon a more practical turn, and these will no doubt receive full consideration at the hands of the Commission, which, it has been announced, is dealing with the school, and which we must sincerely hope will succeed in formulating a scheme that will be more fruitful of good results than the present routine of work has been.

Of the financial condition of the Dairy Farm and Model Farm I have a good account to give. The gross receipts of the Government Dairy alone for the year should not fall below R19,600, those of the grass lands attached to the Dairy ought to exceed R3,000, while for the Model Farm I put down the gross receipts at over R4,000. The profits, after deducting all working expenses, rent, &c., from these three sources, will be between R5,000 and R6,000.

The Dairy was started in 1893 with a vote of R19,522·12 from Government, but later on it was found necessary to procure an advance of R11,500 in order to meet the losses resulting from an outbreak of cattle plague and also to meet the demand for a sum of R4,400 as compensation for acquiring the lease of the Model Farm. Of this advance the Dairy has been paying back over R7,000, and the balance due about R4,000 will be easily met this year. Against the capital of R19,000 odd must be placed a sum of nearly R9,000 credited to revenue in 1893 and 1894. So that the position of the Dairy, at the end of this year, may be roughly sketched out as follows:—

Capital cost	R10,000
Cash in hand	2,500
Value of stock, &c. ...	12,000

This, I think, may be considered satisfactory, and if the Government decides to dispose of the whole concern the capital cost will be cleared by the sum realized.

The experiment in vine growing, which attracted considerable notice while it lasted, terminated at the end of one year for which period it had been originally arranged to make the trial.

We have now made a small beginning in apiculture, and I would draw attention to the new hives on the premises, for the designing and construction of which I am indebted to Mr. Chas. Andree of Kurunegala.

The *Agricultural Magazine* still continues to appear regularly every month, having now had a continuous life—by no means common in the history of Ceylon Magazines—of over 9 years. The Magazine, I can assert, has done good work in the cause of agricultural education by bringing much useful information before the public, and it now travels to most parts of the world, both independently and in company with the *Tropical Agriculturist*, while it serves as an exchange for all the important agricultural journals and papers published.

I stated at the outset that I had not much to give you in the way of a report this evening, and I will therefore conclude by thanking my assistants both in the Schools and Dairy and Model Farm for their co-operation, thanking you, ladies and gentlemen, for the kind support which you have given me by your presence here today, and last but not least thanking you, Mr. Chairman, for the honour you have done us in presiding on this occasion.

The prizes were then distributed by the Chairman, Mr. Drieberg calling out the names of the prize winners, who were the following:—

Senior Class, 1896.—Proficiency in Agriculture: C. E. Wickremeratne, (he was absent being employed as an Agricultural Instructor, and the Chairman testified to the good work done by him at Balangoda). Proficiency in English and Mathematics: C. E. Wickremeratne.

Junior Class, 1896.—Proficiency in Science: W. R. De Silva; Proficiency in English and Mathematics: W. R. De Silva.

Senior Class, 1897.—Proficiency in Agriculture: A. R. Jeremiah; Proficiency in English: G. W. De Saram; Proficiency in English and Mathematics: D. C. De Silva; Proficiency in Science: J. E. Fernando; De Soysa's prize for Agriculture: E. R. Jermiah; Prize given by the Manager of the Dairy, for proficiency in Dairy work: E. R. Jeremiah.

School Certificates, 1896.—First class, C. E. Wickremeratne; second class, D. J. Dassenayake.

School Certificates for 1897.—First class, E. R. Jeremiah; second class, D. W. De Saram.

Mr. B. Cull, the Director of Public Instruction, was the next speaker. He said, that there was an old proverb which many of them knew which ran to the effect that the cobbler should stick to his last. He felt that in addressing a

meeting of gentlemen—students more especially—some of them cognisant with agriculture, he knew nothing about it, but responsible as he was to some extent he supposed he must say a few words, but he could assure them that they would be very few. He was glad to hear from Mr. Drieberg's report that in spite of the paucity of numbers good work had characterised this last session of the year, and that good work had been attested by the recent examination held, manifestly showed that the work had really been good. For his own part he had always regretted and still did regret that more interest in the Agricultural College was not shown by those who ought to be interested in it. It started with very good beginnings and numbers, and was supposed to appeal to a special class of people, those who were more particularly interested in agriculture, especially land owners and the like, and general promises of support were held out. These promises had not been fulfilled. He thought it was a pity. He believed that boys who had been sent from the College during the few years of its existence had sufficiently shown that they had learnt what they ought to learn at the College and carried this knowlekge out in practice. One special instance he learned the Chairman incidentally refer to during the prize distribution was the case of the Agricultural Instructor working at Balangoda. His work he (the speaker) could speak from personal experience showed very ample and satisfactory results. If more students were sent to the College more could be done by the College. But if landowners failed to redeem their promise, or failed to perceive the utility of the College, numbers must fall off. Another point to which special attention might be directed was that there was too much of a general idea—merely a casual idea gained without any sufficient information at all—of criticising the College as very expensive, a College consisting of only a few boys, half a dozen or so, and not worthy of support. It was so easy to write generalities of this kind, so easy to write without special knowledge. In the Superintendent's Administration Report he referred to at least five schools carried on in these buildings—the Agricultural School, the Forestry School, the Training School, the Practising School and the Veterinary School and there was also Dairy Farming. It seemed to him that most people were very hard to satisfy when they did not think that that represented a fair amount of work to be undertaken with a fair amount of success achieved. They must bear in mind that the school did not consist of half-a-dozen students. These were only one item in the mass. The school embraced other classes all of which were doing good work, so he was informed by those responsible for the work. If that was more generally recognised there would be less captious criticism as to the usefulness and maintenance of the school in its present status. Mr. Drieberg mentioned the bright prospects that had been opened up recently by the newly-established Technical School. Undoubtedly he thought that the Technical School had really a bright prospect before it, and he did not see why similar prospects should not in the hereafter extend to the various branches of this school as they became more widely known. At any rate even admitting that the School of Agriculture is at present small in numbers, still it had been supplemented by the other schools which he had mentioned to them: notably the Veterinary School and School of Forestry, in which good work was being pursued. With regard to the Veterinary School two boys had been sent from the Colombo school to receive full instruction in the Veterinary College in Bombay. He was looking over the papers only a few days ago in regard to one boy who had since returned to the island. He found in the report of the Principal of the College at Bombay he spoke most hightly of the work of this student. One paragraph that specially struck him was that for his own part, in case the student failed to obtain employment under the Government of Ceylon he (the Principal) would be only too glad to enlist his services on behalf of the Government of India. (Applause.) This was as good a proof of what a boy was worth as they could want to have. Coming back to the School of Agriculture and the possibilities of usefulness that ought to attach to it, it was only last week that he received a letter from the Government Agent of the North-Central Province in which he expressed his wish to attach to all Government schools in the Province about an acre of land to be planted with economic products, to be taken charge of by the head teacher of the school and also by the boys. Their interest and work were to be enlisted in the enterprise. It seemed to him to be a very good idea of utilising some of the agricultural students where they could be utilised by appointing them to districts where Revenue Officers or those in charge took an interest in the practical work that was being carried out. For his part he always thought that one of the chief agencies that led to the decrease in the Agricultural School was that there was not sufficiently direct influence or supervision over the school. There was a dual responsibility—the responsibility of the Department and the responsibility attached to the Revenue Officer. Neither of them were practical responsibilities, and so they to a certain extent became evanescent. In the case of such gardens he wrote to the Government Agent pointing out that many economical foods could be cultivated in districts where they were now neglected, by their treating such simple foods as yams, sweet potatoes and more especially betel. He had been amazed to find that the bulk of the betel sent upcountry was grown in villages a few miles from Colombo. Large supplies were sent dayby day, and with the exception of a few places he had seen the supply of betel was mostly obtained for the higher districts from these two or three low-country districts. He believed the betel vine was capable of cultivation, if not in the higher altitudes at least in the lower ones, and seeing that betel was not a luxury but a necessity, it should be encouraged. (Applause.) He understood the Mayor was going to make an elaborate speech on sanitation, and he would not keep them further from the promised treat.

SUGGESTION OF A UNIVERSITY.

The CHAIRMAN said:—It is a pleasure to me to preside at an annual prize-giving of the Agricultural School. It recalls to me the glowing enthusiasm of my friend. Mr. Green, to whom it

owes its birth. It is a pleasure to me to be associated with your Principal, with members of whose family I had lived on the pleasantest terms for many years. I have, too, a double interest in schools, having been both a schoolboy and schoolmaster. A schoolmaster I was—earning a hard living at a younger age than most of the students who are present today. I always look back to that time with pleasure. It was the hardest work I ever had, for I was teaching others all day and myself a good deal of the night. There are those who argue that the Agricultural School, as a training school for agricultural students, seems likely to fail in its object because it cannot attract students without adventitious aid. Students only came because the fees were low and because they hoped that special prizes would be offered, and that were these inducements withdrawn, students would cease to be attracted. Why, of course, no school will attract students without offering some special attractions. But the reply is—an agricultural training school is founded no doubt to meet a special demand for that form of education. I used to discuss the question with Mr. Green who had a two-fold idea:—To spread the teaching of agricultural science among the peasantry through the agency of trained teachers from this centre in the Government village schools. The other idea was that gentlemen farmers—a most neglected illiterate class in this country—should send their sons here to pick up Western ideas. This was bound to fail from two causes, first, where the class of embryo agricultural school teachers came the sons of wealthy people would not come. The parents preferred a literary education because it sounded better and because the boys mixed with their equals. It was impossible to cater for both classes at the same time. But there was, and is still, this still more fatal objection. An agricultural training school, such as that at Cirencester is an excellent institution, but only under the condition, *i.e.*, that the students shall be sfficiently advanced in primary education before they enter such a class. It is specialising in knowledge and should be wholly apart from the rudiments of general knowledge. It is only wasting the time of the teaching staff if there is not this foundation to work on. The foundation is a sound elementary, commercial education in English:—A decent Board school curriculum, or better still, the learning to be got at a Scotch parish school. Your fundamental error here is to try to build on a defective foundation. Were I king, I would ordain that all boys in Colombo should be taught rather to a certain age, 14 or 15, or up to a certain standard in the English language and in reading, writing and arithmetic. Under our present voluntary system, one-half at least of the boys of Colombo get no education at all, and the rest, when they ought to be grounded in elementary subjects, are being taught to acquire a glimmering of special culture when they are mentally still unfit to assimilate the knowledge. A very fair illustration occurs to my own knowledge in connection with this School Magazine. Ceylon is essentially an agricultural country, although I see a dozen reasons why Colombo should also be a manufacturing centre. Well, it is for the present an agricultural country. I contributed not long ago to the "Agricultural School Magazine" a paper on an agricultural subject in order to elicit criticism on the facts and figures which it had taken me years to collect. Six newspapers turned the stuff into leading articles and indulged in guarded generalities. But although the subject was one which must be vitally important to very many trained students, and to gentlemen farmers; and although I purposely quoted figures (not my own) which must have struck any reader as abnormal, not a single criticism ever appeared either in the magazines or in the six newspapers. You may call that Oriental apathy. I am inclined to hold that it is a direct result of the Ceylon system of education. An unhealthy Strasburg system of gathering up just a portion of all the chickens. And now I come to my deduction and the conclusion which has a special bearing on the future of this school. All boys of Colombo should be taught the English language and the rudiments of a commercial education, Reading, Writing and Arithmetic. They should be at School from 8 years until they have passed the Vth Standard of a Board School, or until they have attained 15 years. The ratepayers should elect their representatives by Wards, and each Ward should either arrange with the great Educational Societies to provide this elementary education or should apply to the Municipal Council for the establishment of a secular Board School. It is quite possible that this could all be arranged without an addition to the direct taxation; although Colombo ratepayers should bear in mind that their rates are only half of those in some other eastern cities, and only one-third of what I have to pay at home. At the end of this free course of elementary education, 90 per cent of the boys should straightway go and earn their living. If they care to read then, they can go on educating themselves till they die. We will give them opportunities to do so. If they don't care to read and go on, they can do without. They may forget what they have learnt and be none the worse for it. But they will have had their chance—which they have not now—and that is a chance which should be allowed to all free men under the principles of English rule. There will remain 10 per cent or so: either the sons of wealthy parents or boys of exceptional promise. Those who are destined to have a superstructure raised on the sound foundation thus laid in their mind will at the age of 15 or 16 matriculate at the University of Colombo. The University of Colombo—where all the higher education will be imparted—will raise a stately noble architectural triumph on the site where we are now assembled. Situated in the central of the wealthy suburbs of Colombo, it will be most convenient for the purpose. It will be a teaching, examining and residential University. The cluster of houses—Colleges we may call them—grouped round the University buildings would bear the time-honoured names of the Educational History of Ceylon. St. Thomas' College would be there, and the Royal, St. Joseph's, St. Benedict's perhaps: perhaps Trinity for the Kandyans and perhaps Gogerly House to represent the time-honoured name of a revered disciple of Wesley. And I have my eye on a big new house, not far off, for an ideal home for the

Newnham of another clime. But, visions apart, what benefits has this new development of this site to recommend it? I will briefly enumerate them:—(1) The University will provide lectures in Letters—Litt: Hum: in law: in Medicine, in the applied Sciences: Engineering, Surveying, Electrical Engineering, Forestry, Agricultural Science. (2) All the teaching strength of Colombo —which is dreadfully wasted as it is,—would be concentrated for the benefit of all—and there would not only be a great addition to the strength of the tutorial staff, but there would be a great economy in the cost. You would have a better service cheaper. Think how strong the tutorial staff would be with the pick of Wesley, the Royal, St. Joseph's and St. Thomas', this school and St. Benedict's combined. Many others of us would be glad to offer our services: imagine how much more efficient would be the exercises of Mr. Broun, Mr. Human, Mr. Barnard, Mr. Templeton and many others, who now have to work with what material they can pick up. Many others of us would help. I for one would gladly serve under the classical tutor as a lecture in my hobby—English literature. Then, again, there is the social side. The old schools would still be gathered in friendly rivalry, with better knowledge of each other, more chance of mutual improvement, with far finer *playing* fields. and without the ragtails and bobtails, who now spend years at the schools without learning anything. Think of the advantage to the law students and medical students to be kept in hand and nursed in the tradition of a University, instead of being scattered about without cohesion or a local habitation. This too would be a solution of the problem which the Government has to meet in regard to appointments. When the class lists come out every year, the prize to the winners in the classical and mathematical sides would be University scholarships of £100 a year for three years at Cambridge, with the option of a local cadetship on taking at least a second class at Cambridge. Another English scholarship of £100 would go to the first in the Science Schools, for a three years' course at Cooper's Hill to be followed —after a satisfactory final examinatin at Cooper's Hill,—by a nomination into the Public Works Department. Other well placed lads in the Science side would get posted to vacancies in the Survey Department, in the Railway Workshops; in the Municipal Electrical Department. The first in class should have a scholarship of £50 a year to help him on at the Bar Examinations in England. Similarly, those in the Forestry and Agricultural Schools at Dehradun would earn scholarships to be followed and supported on good reports. There would be a regular examination held at stated intervals—once a year—just such a central test as should satisfy the Government: and we would all—I mean all of us who have thrown in our lives with Ceylon, whether we are born here, or who merely come to live and die here, or who totter home to rest a few years in England—we would all be proud of our University at a city where alone throughout the East I believe such a University to be possible; and my friend, the Superintendent of the School of Agriculture, would make a first-rate Bursar, as well as lecturer, and he and I would put our heads together and see how we could manage to run it at a cost to the Government, and to the Government Educational Societies, at not more than they spend now to less purpose. Thus and thus, ladies and gentlemen, would I do were I King of Utopia.

Mr. S. C. Obeyesekera was the next speaker. He thought Agriculture was one of the most honorable industries that a man could occupy himself with. He condemned the captious critics who ran down the Agricultural School, which was one of the best things that Government had given to the people. It was one which the Government had given for the greatest good of the greatest number. If the speaker had been able to avail himself of the agricultural training that was imparted in this school, he would have been much better able to discharge the functions of a landlord, than at present, and with more satisfaction to himself and the labourers under him. Ceylon possessed in an eminent degree, land, labour, and the capital for agriculture, but the only want for the improvement of this industry was scientific knowledge on the subject. This was a subject necessary to be seriously considered for the improvement and advancement of the masses of the population. Criticising the School on a commercial basis was an act of suicide and deserved the greatest censure. The Government which was a paternal one did not require profits as in a commercial undertaking, The profits and returns of the expenditure incurred, would be the amelioration of the people. The amelioration of the people and the improvement of the industry should be carried on through the medium of the school, and it was no matter whether there was an annual loss of £600, or even a thousand or two. This education should be supported by the Government for the good of the people. It was a recognized policy with the Eastern Kings, to devote funds for the improvement of agriculture without considering its returns. Why was it? Simply for the amelioration of the condition of the people. He then touched on the works done by King Panduwasa in Pihitirata, followed by Kings Dhatusena and Prakramabahu. Visitors to the parts of the Island where irrigation works had been carried on by Sinhalese Kings, would be surprised to see what amounts must have been spent on tnem, for the improvement of agriculture. Were they reproductive works on a commercial basis? The same was the case during the Dutch Government under Governors Flack, Vandergraes and Van Eyck. As an instance he pointed to the Mullcriyawa tank, a few miles from Colombo. He was sure that all would agree with him that the Agricultural School needed only encouragement, and he maintained that its existence should be hailed by everyone.

Mr. Advocate James Peris was the next speaker. He said he had been asked to move a vote of thanks to the Chairman. He was sure that every one would agree, that the selection made by Mr. Drieberg for the Chairman was an excellent one. The Chairman had taken a great interest in the people of Ceylon, since the day he had landed in the Island. He had taken a great deal of interest in his official and private capacities, in agriculture and education in the Island, and his interest in these subjects was evident from the educational scheme given by him

that day. His scheme deserved the serious consideration of all. It was time, the speaker thought, that they had a University at Colombo. The number of colleges and schools now existing could be concentrated to form a University. He was glad to see a passage in the report boldly suggesting to Government to improve the prospects of the agricultural students, as was done in the case of the Technical school students. This was a very good suggestion, and shows the interest he took on the subject, very few acquire knowledge for its own sake. Even in England it was the same, except that a very few, who were wealthy, who pursued knowledge for their improvement only. Good opportunities should be put forward for acquiring knowledge on special subjects. He then stated that the native Headmen, especially the Chief Headman, should acquire knowledge in agricultnre. He was sorry to say that in the case of some Mudaliyars and Muhandirams of Korales, they were deficient even in their mother language. Such men should not be entrusted with the duties appertaining to Chief Headmen. He suggested that these Headmen should be given an agricultural training on scientific principles in this school. If they possessed such a knowledge, the people and the agriculture in the Korales under them could be greatly improved. He was sure that this was matter deserving serious consideration. He had great pleasure in moving a hearty vote of thanks to their Chairman.

Mr. ALLAN DRIEBERG, Advocate, seconded the vote, and it was carried with applause. On the call of Mr. Drieberg, three cheers were then given for the Chairman, and the proceedings closed. The Volunteer Band, which was present, then played a few selections of music, light refreshments being served to the visitors.

GENERAL ITEMS.

Numerous experiments and investigations, including the cultivation of crops under careful observation by practical men, have resulted in general belief and acceptance of the following facts which may be turned to practical account: (1) That leguminous plants well furnished with root nodules will collect and store per acre the nitrogen supplied by several hundred pounds of guano, nitrate of soda or sulphate ammonia. (2) That when the spores of the bacteria are distributed in the soil and taken up by the root hairs of the plants, these spores induce abnormal growth in the tissues of the roots and increase to many millions of organisms in a short while. (3) A soil may contain some of the bacterial spores and therefore there may be no nodules formed. And as each variety of leguminous plant appears to be the host of a special bacterium, it is quite possible that the one required may not be present to invest and form nodules on the crop; so that in both cases there would be no nodules or collection of nitrogen. To provide the proper bacteria in the soil, a mode of soil inocculation has been adopted. A small quantity of soil from a field in which a good crop of the special legume to be cultivated has been grown is spread over the new land.

The system of planting fruit trees in holes is much condemned. An authority on orange culture says:—I have found few places where fruit trees can be planted with any hope of success in holes. In a clay soil or clay subsoil planting in holes will be as bad as planting in an iron pot, and I have no doubt that the dying back of comparatively young trees and the yellowing of leaves must be attiibuted to that old system of digging a hole in the soil as hard as a sheet, planting the tree and filling the hole with water. The groundshould be prepared by ploughing and subsoiling as deep as possible—say 18 to 24 inches—during the rains, and the clods broken up and the land levelled before planting.

A well-tried cure for the poultry scourge, contagious "roup" as it is called, though the disease is more probably typhoid in character, is to get a tub of warm water, add a disinfectant such as carbolic acid or other coal tar by-product, and with some soap give the bird a thorough good washing, dry the feathers and place the bird before a good fire.

Citronella oil which is extensively used in perfumery and for other purposes, is chiefly obtained from Ceylon and Singapore. It has been noticed for some time that the native-distilled oils have an aroma much inferior to those distilled by Messrs. Fisher of Singapore and Messrs. Winter & Son of Galle, aud that these two classes of oils also show marked differences in physical characters. Messrs. Umney and Swinton have lately examined a number of commercial samples of both classes, and their results were communicated to the recent British Pharmaceutical Conference. In the case of the native oils, submitted to distillation, a residue amounting to 37 per cent of the total was left behind, while the whole of the oil from English forms distilled over. This difference was thought to be due to the fact that the latter were steam distilled and the latter obtained by fire heat. The residue referred to was distilled, after purification, between 245° and 280°c., and had a high specific gravity, possessing all the properties of a sesquiterpene, but differing in physical properties for any previously-described bodies of that class. Being odourless it is considered a valueless constituent, while being fairly soluble it affects the sclubility of the oil. Again, it was found that while camphene was almost entirely absent from the native oils, the oils of the English firms consisted chiefly of camphene, the active terpene of the native oils being absent, owing probably to its having been removed. The chemists therefore conclude that the native-distilled oil is in no way sophisticated, but is a genuine natural oil. [It would be interesting to know (1) whether the natives use any other grass other than, or in addition to, the true citronella grass (the cultivated form of *Andropogen nardus*), and (2) whether any difference as suggested in the above report is the methods of distillation by natives and Europeans. Some years ago it was pretty well known that a good deal of adulteration with kerosene oil was practised by the natives. Has this practice been given up now, or have the manufacturers found another adulterant which chemists are unable to identify?]